

MECHANICAL ENGINEERING

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A. S. M. E. AFFAIRS

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The Secretary's Letter

Ethics and the Engineering Profession

TO practice a profession requires a moral concept, otherwise the activity is a vocation rather than a profession.

The essential characteristic of a profession is that it be of service to others. Popularly, the professions are limited to such activities as those of law, medicine, ministry, architecture, etc.; but essentially, any work may be made professional provided the performance of that work is in the right spirit, namely, that of service to others. At least as long ago as 400 B.C. the medical profession had reduced to writing its moral code under the teaching of Hippocrates. It ought not to be necessary to go into the history of the legal profession and its code in order to demonstrate the essential quality of the concept of the members of that profession; or similarly, to make the point that if we are to have an engineering profession, we must have a code of ethical conduct.

Many of the engineering societies for quite a number of years have had codes, but only in one of the engineering societies does your Secretary happen to know of any penalties having been inflicted for non-observance of the code, or in what constitutes unprofessional conduct. Our Society has had a code which, comparatively recently, has been re-drafted, and there seems now to be a prospect of getting it approved not only by our Society, but also by the other leading national engineering societies, and thus make a step toward establishing a code for the whole profession.

During the war the nation was actuated by the loftiest ideals, and in the main our efforts were patriotic and unselfish. With the conclusion of war there has been a drop in the moral standard throughout the world, and the United States has not been free from such a relapse—but we trust the retrogression here is only temporary. It is inevitable that during this drop in moral standards it is difficult to arouse interest, even among the members of the engineering profession, in the subject of a Code of Ethics.

A man active in the Inter-Church World Movement, just home from a tour of the world, stated recently in a conversation that among all classes of people it is felt the greatest hope for the attainment of the highest ideals lies in the engineering profession. We trust that we may approach the expectations of this world observer.

In the September issue of MECHANICAL ENGINEERING, the Code of Ethics prepared by our Committee has been reprinted. In a few short, concise and definite sentences this report presents a code of professional conduct that will assist every member in avoiding errors and mistakes. Few of our members realize the importance and tremendous potentialities of this simple code. The proposed Committee on Professional Conduct will form a body which our members can consult when in doubt as to how to meet certain situations. Furthermore, the adoption of this code

by the Society and its wide publication will greatly increase its prestige and influence among all our people with the result that membership in the Society and the practice of the profession of engineering will take on a new meaning.

To the degree that the public becomes aware of these self-assumed standards will the movement have social importance.

Public opinion is made up of the opinions of individuals; therefore the contribution which we make toward the acceptance of ethical standards will be in proportion to the individual efforts of every member of the Society. And if the code becomes generally adopted, opinion will likewise be in proportion to the individual contributions by every member of the engineering profession.

Please accept a personal responsibility for the establishment of an Ethical Code, write the Committee,¹ and work for its general acceptance.

CALVIN W. RICE,
Secretary.

The 1920 Annual Meeting

Very satisfactory progress is reported in the plans for the 1920 Annual Meeting of the Society to be held in the Engineering Societies Building, New York, December 7-10.

In its selection of Transportation for the subject of the Key-note Session, the Committee on Meetings and Program feels that it has chosen the most important problem in post-war reconstruction. It is planned to subdivide the subject into a consideration of railroads, waterways, motor trucks, and terminals. Under railroads a subdivision will be made of short-line feeders and interurban trolley transportation. Men who will be able to enunciate the principles governing the solution of each of the problems in these subdivisions have been selected by the Committee. The morning of December 9 will be devoted to the subdivisions, and in the afternoon the problem of transportation will be analyzed by a noted expert. This analysis will be followed by an open discussion on all phases of the subject. This entire session will treat with the problems of transportation from the economic as well as engineering point of view, and it is confidently expected that the points brought out at the meeting will be of inestimable value in educating the engineering profession and the public as to the exact requirements for a solution of this so pressing problem.

A number of valuable papers sufficient to make up two general sessions have been received by the Committee. Some of the subjects are—Design of Large Center-Crank Shafts, Calibration of Nozzles, and Strength of Gears.

The subject of Appraisal and Valuation will receive extended

¹ Prof. A. G. Christie, Chairman, Head of Dept. of M. E., Johns Hopkins Univ., Baltimore, Md.

consideration at this meeting. A committee appointed by the President of the Society will go over all of the papers previously presented before the A.S.M.E. on this subject and prepare a résumé for presentation at the session. Additional papers will be procured where necessary in order to round out the subject.

The sub-committee in charge of the Woodworking Session, of which Mr. Thos. D. Perry of Grand Rapids is chairman, has prepared a tentative program which will prove of great value to all those interested in the adaptation of engineering principles to woodworking. As we go to press for this issue, it is impossible to announce the entire list of speakers, but a very interesting session is assured.

Initial sessions will be held by six of the newly formed Professional Sections. The Management Section is to devote its meeting to a consideration of the life and work of Mr. Henry L. Gantt. The Professional Section on Fuels will present four papers whose subjects and authors are as follows: Fuel Supply of World, L. P. Breckenridge; Low-Temperature Distillation of Coal, O. P. Hood; Fuel Conservation versus Money Conservation, D. M. Myers; Relative Cost of Electric Power Generated at Mines and near Point of Consumption (author not yet chosen).

The subjects of the three papers to be presented at the Railroad Section's Session are as follows: Static Adjustment of Trucks on Curves, Increasing the Capacity of Old Locomotives, Modernizing Locomotive Terminals.

The Professional Section on Power is planning a symposium on Centralization of Power. It is proposed to discuss the mechanical phases of the centralized power circuit and the super-power plants to be built in connection with it. The Section on Textiles has presented its program, which it advises is subject to change, but at present covers the following subjects: Textile Fabrics for Mechanical Purposes, Organization of Textile Manufacturing Processes, Ventilation of Dye Houses. The Machine Shop Section will present papers on interesting problems.

A very important and valuable feature of this next Annual Meeting will be the Memorial Session to be held for Past-President Dr. John A. Brashear. A committee of past-presidents of the Society, consisting of Worcester R. Warner, *Chairman*, Ambrose Swasey, Dr. Alex. C. Humphreys, James Hartness and Dr. Ira N. Hollis, will assist in the selection of an orator to prepare and present a tribute to Doctor Brashear which will be worthy of perpetuation as a monument to the wonderful character of the man.

The A.S.M.E. Committee on Education

A meeting of the Committee on Education was held in the Council Room on Friday, September 10. The Committee invited a number of men to assist in a discussion of the duties and opportunities of The American Society of Mechanical Engineers toward the training of men for the industries. Of those invited the following were present: President F. J. Miller, Secretary C. W. Rice, E. S. Carman, E. M. Herr, F. P. Molter, J. C. Dietz, M. W. Alexander, H. B. Shaw, H. B. Sargent, J. P. Monroe.

The Committee consists of: Dr. Ira N. Hollis, *Chairman*, W. W. Nichols, C. R. Richards, C. R. Dooley, P. L. Dougherty, John C. Spence.

President Miller presided over the meeting, which was opened by requesting answers to a number of questions propounded to bring out opinion as to the place of the A.S.M.E. in training all classes for the industries of the country. The consensus was that the Society has a definite duty in this matter of industrial education and that its opportunity is great for service both to its membership and the country. Suggestions brought out covering the future work of the Committee may be classified as follows:

- 1 That The American Society of Mechanical Engineers, either directly, or through some other agency, collect, classify and report the different systems of education and training for men engaged in the industries.

- 2 That the Society seek to bring about greater unity of purpose in the training of men by allying itself through committees, or otherwise, with all of the associations formed to promote this important purpose.

- 3 That a committee be formed to study this question further with the purpose of making it in some form one of its activities.

- 4 That whatever is collected be published for the benefit of the members of the Society to enable them to do their full share in the training of men for the profession and for labor.

- 5 That the Society endeavor to establish some kind of a clearing house of information specially for the industries in reference to the training of men.

- 6 That if possible the Society endeavor to arrange a plan for supplying lecturers from among its members to the corporation schools.

- 7 That if it is feasible, some elementary textbooks be provided for the apprentices in those industries wherein the Society is especially interested.

It was decided to recommend the formation of a new committee of the Society on Education and Training which would take over all of the educational work of the Society. By formation of sub-committees on relations with colleges, relations with corporation schools, relations with Government schools or commissions, it is believed that the activities of the Society may be unified. The financial requirements of the Committee were given consideration, and it is believed the work to be done could be best accomplished by cooperation with agencies provided with proper funds.

The Committee believes the solution of this important problem of industrial education can be greatly assisted by a whole-hearted interest on the part of the entire membership of the Society and by the offering of services by members who are vitally interested and who can contribute considerable time.

Committee Activities Now Resuming

Though the work of the Society is continuous throughout the year, there is usually a kind of reunion of committee men as soon as the vacation period is over, and a corresponding re-consecration to the work of the organization which naturally reacts favorably to the general development.

These are the days of new ideas, and those who are familiar with the activities know that the Society is getting its share of them, and that many changes, all intended to be in the line of progress, are being suggested.

The new fiscal year of the Society starts on October 1, and this itself is a contributory cause to new development for on this date goes into effect the new budget of estimated income and expenditures for the year.

This budget is now a large one, approaching half a million dollars, and is a measure of the responsibility of the officers and committees, and in fact of all having to do with the administration of the Society.

In addition to the continued and progressive enlargement of our own activities we have endeavored modestly to take our position among the engineering organizations through our joint activities.

Our Society is now an organization of considerable importance and acknowledged influence in the engineering profession. This being accepted, it is important for every member to see in the growing position of the Society, a greater opportunity and responsibility to render service. This is the time of the year to think about these things and to let the Secretary have the benefit of any suggestions which you can make.

Dean Cooley Appointed on Postal Advisory Committee

Dean Mortimer E. Cooley of the University of Michigan, Past-President Am.Soc.M.E., has been appointed a member of the Postal Advisory Committee which is assisting the joint Senate and House Post Office Committee in their investigation of the postal system. It will be necessary for the Advisory Committee to deal with the construction of mail tunnels, tubes, and other mail transportation and handling devices. It is gratifying to have the profession represented and to realize that the Government is becoming alive to the importance of selecting engineers to fill important positions allied with or involving engineering.

DOINGS OF LOCAL SOCIETIES

CLEVELAND ENGINEERS INVADE DETROIT

August 28 was a big day in Detroit. Members of the Cleveland Engineering Society, over three hundred strong, invaded the Ford city early in the morning after a memorable night-before boat trip on Lake Erie.

The anticipations of the "Fifth City" members, as they style themselves, were not unwarranted, as the Detroit Engineering Society, as host, had planned a day brim full of good things. The main attraction, and the much advertised one, was an inspection of the Blast Furnace Plant of the Ford Motor Company in all its ramifications. The plant covers an area of some twenty acres and contains much of interest to every type of engineer in its waterway, storage yards, by-product plant and blast furnaces. The by-product plant built by the Semet-Solvay Company is considered one of the cleanest and most up-to-date plants of its kind, and is now in full operation, turning out coke, illuminating gas, light, oil, tar and ammonium sulphate.

After luncheon, where the Cleveland Engineers were guests of the Detroit Society, cars were placed at the disposal of the visitors and numerous pleasure trips were made. Many of the Clevelanders remained over the week end and some extended their stay to the ten-day limit of the trip ticket.

SCIENTECH CLUB OF INDIANAPOLIS

The Sciencetech Club of Indianapolis has been very active throughout the Summer with several meetings and a picnic on September 4. The picnic was reported a great success. (Among the prizes was an illicit still. Angus has it. Prohibition officers take notice.)

At a meeting on September 2 Mr. Calvert gave a talk on Water Filtration. He traced the history of improvement in filtration necessitated by congestion of population. It now consists of sedimentation and of sterilization. An advance in modern methods was made in 1908 when liquid chlorine was introduced to kill bacteria.

At the meeting of September 9 Mr. Weinshank addressed the Club on Heating and Ventilating. The high cost of fuel has made the problem an important one, and no architect now attempts to design without the assistance of a specialist in heating, ventilation, and humidification. The three have become essentials. Humidity has become an important problem because heat applied to cold outside air necessary for ventilation reduces its percentage of moisture, causing catarrhal diseases.

The next meeting is scheduled for September 16 at the local Chamber of Commerce, when the Research Committee will present a resolution relating to theses in scientific school courses.

ENGINEERING SOCIETY OF AKRON

The Engineering Society of Akron, Ohio, had a splendid program for September 14. It announced Seven Speakers in Seventy Minutes. Can it be Done? Here are the speakers:

Dr. D. C. Sowers, Director Akron Bureau of Municipal Research

F. C. Tolles, Superintendent Bureau of Public Works

H. H. Frost, Superintendent Bureau of Water Supply

J. E. Root, Engineer Bureau of Sewerage

E. A. Kemmler, Engineer Bureau of Highways

C. T. Fisher, Engineer Planning Commission

E. A. Zeisloft, Director and Chief Engineer Department of Public Service.

We hazard a guess that Akron's opening meeting established a standard which if maintained during the coming year will provide the engineers in and about that city with a series of worth while engineering talks and discussions.

PUEBLO ENGINEERING ASSOCIATION

Members of the Pueblo Engineering Association are endorsing the Colorado Society of Engineers by their membership in the latter organization. In this way they realize that they can continue their local activities and join with the Colorado Society in promoting the interests of the profession throughout the State.

DETROIT ENGINEERING SOCIETY

The Detroit Engineering Society opened its fall season with a "Smoker" on September 3 in the Board of Commerce. Prof. John C. Parker, in charge of the Electrical Engineering Department of the University of Michigan, gave a talk on The Engineer in Organized Society—What is Hampering His Recognition. At the next meeting on October 17, Mr. Charles Evan Fowler, consulting engineer of New York and Detroit, will give an illustrated talk on Harbors and Harbor Bridges, with particular reference to the proposed Detroit-Windsor Bridge.

THE ENGINEERING SOCIETY OF BUFFALO

The Year Book just issued by this organization exemplifies coöperation in a manner most commendable, and the Buffalo Society is to be congratulated upon its grasp of the rather elusive problem of how to get engineers (and particularly engineering organizations) to coöperate.

The booklet contains a concise statement of the history and organization of the Engineering Society of Buffalo and of each of the local sections or chapters of national organizations which are affiliated with it. These include the Buffalo Sections of the American Chemical Society, the American Electrochemical Society, the American Institute of Architects, The American Society of Mechanical Engineers and the Society of Automotive Engineers.

A representative of each affiliated organization holds office on the Board of Directors of the Engineering Society of Buffalo.

The following table, corrected to February 1920, gives the number of members in the Buffalo society and each of the affiliated sections; the second column gives the number in each section who are also members of the society:

	Total	In E. S. B.
Engineering Society of Buffalo.....	381	..
Affiliated Sections:		
American Electrochemical Society.....	124	24
American Chemical Society.....	297	31
American Society of Mechanical Engineers..	169	53
American Institute of Architects.....	55	2
Society of Automotive Engineers.....	113	17
Total Engineers reached by the E. S. B.....	1012	..

A. S. M. E. Representatives on American Engineering Council

The Council has appointed the Society's representatives on the American Engineering Council, the governing body of the newly created Federated American Engineering Societies. The delegates appointed will hold office for two years beginning January 1, 1921, and will also represent the Society at the organization meeting of the American Engineering Council to be held at Washington, D. C., November 18 and 19. Section 2 of this issue contains further details of this organization meeting. The list of representatives appointed follows:

L. P. ALFORD, formerly editor *Industrial Management*

E. S. CARMAN, secretary and chief engineer, The Osborn Manufacturing Company, Cleveland, Ohio

R. H. FERNALD, professor mechanical engineering, University of Pennsylvania, Philadelphia, Pa.

A. M. GREENE, JR., professor mechanical engineering, Rensselaer Polytechnic Institute, Troy, N. Y.

W. B. GREGORY, professor experimental engineering, Tulane University, and irrigation engineer, U. S. Department Agriculture, New Orleans, La.

W. A. HANLEY, master mechanic and chief engineer, Eli Lilly & Co., Philadelphia, Pa.

D. S. KIMBALL, professor industrial engineering, Cornell University, Ithaca, N. Y.

CHARLES T. MAIN, consulting engineer, Boston, Mass.

FRED J. MILLER, president of A.S.M.E., 1920

L. C. NORDMEYER, secretary and treasurer, Tait and Nordmeyer Engineering Company, St. Louis, Mo.

V. M. PALMER, engineer of industrial economy, Eastman Kodak Co., Rochester, N. Y.

H. P. PORTER, superintendent gas department, Gypsy Oil Company, Tulsa, Okla.

ARTHUR L. RICE, managing editor *Power Plant Engineering*, Chicago, Ill.

PAUL WRIGHT, engineer and contractor, Paul Wright & Company, Birmingham, Ala.

Management Section Elects Officers

A letter ballot recently taken for the purpose of selecting officers for the Management Section has resulted as follows:

Chairman	L. P. Alford
Vice-Chairman.....	L. W. Wallace
Executive Committee	Frank B. Gilbreth
	C. E. Knoeppel
	S. E. Thompson
Secretary	W. H. Greul

Power Section

Under the heading Professional Sections last month, an error was made in the announcement of the officers of the Power Section. The officers of the Section are as follows: *Executive Committee*: A. D. Bailey, *Chairman*; A. G. Christie, *Vice-Chairman*; L. S. Marks, W. B. Gregory, and T. E. Murray; *Secretary*, C. W. Wilder.

Aeronautic Section Organizes

The organization meeting of the Aeronautic Section was held

in the rooms of the Detroit Athletic Club on September 27. An organizing committee was nominated to prepare a ballot for the election of the Executive Committee. Visits were made to various manufacturing institutions engaged in aeronautical development. A full account of the meeting will be published in a later issue of *MECHANICAL ENGINEERING*.

The Transactions

An unusual opportunity, which probably cannot again be duplicated, is offered to secure certain issues of Transactions, of which the Society has a few copies remaining, at prices far below present day cost.

These volumes of Transactions contain the most valuable papers which have been presented before the Society in the different years which they cover, and constitute reference works of inestimable value to engineers upon an unusually wide range of subjects.

Full information and prices will be sent upon request.

There is also an opportunity for new members, elected to membership since January first, 1920, to secure copies of the current volume of Transactions which is about to be distributed to the membership. Under its constitution the Society cannot furnish, gratis, to new members copies of Transactions for the year of election. In order that these new members may begin their set of volumes this year, however, the Society has printed additional volumes, which are offered to new members this year only at the special price of \$4.00 a copy.

Local Sections Active

Plans for Season Well Under Way in Forty-two Cities. Forty Simultaneous Meetings Planned for Friday, November 5, in Celebration of the First Annual Meeting of the Society Held November 4-5, 1880

GR EAT interest is manifest among the various executive committees of the Local Sections in the plan to hold forty simultaneous meetings in celebration of the first regular meeting of the Society held 40 years ago. A number of the officers of the Society and committee-men of the Professional Sections have promised their support in making this proposed celebration a success.

The suggested program provides certain uniform features, with sufficient leeway to take care of local requirements. The tentative program under consideration is about as follows:

- 1 Trips of inspection during the afternoon
- 2 Subscription dinner, arranged in such a way that those who

do not wish to participate at the dinner can attend the meeting to be held afterward

- 3 Address of welcome by the mayor or some prominent engineer or citizen in each locality
- 4 A fifteen-minute address in each locality by an officer of the Society. Drawing from the members of Council, Chairmen of Standing Committees and living Past-Presidents of the Society, there are just about forty representative officers available to provide one at each of the meetings
- 5 A technical address in each city. These addresses would, of course, be different, and due to the importance of these meetings, it should be possible to get speakers and papers of the

Coming Section Meetings

Buffalo.

October 26. In Auditorium of the University Club at 8:15 P.M. Speaker: Mr. S. T. Dodd, General Electric Company, his subject being Steam Railroad Electrification, the paper to be illustrated by Lantern Slides.

Cleveland.

October 5. At Cleveland Engineering Society Rooms. Speaker: E. C. Peek of Cleveland Twist Drill Company. Subject: Relation to the Industry of the National Screw Thread Commission's Report.

Colorado.

October 29. At Metropole Hotel, Denver, Colorado.

Mid-Continent.

October 14-15-16. Joint Meeting of the Mid-Continent and Houston Sections at Dallas.

New York City.

October 22. At Engineering Societies Building. Sub-

ject: Steam vs. Electric Railroads. Several speakers of prominence. Joint Meeting of the New York Section, A. I. E. E., Professional Section on Railroads, A.S.M.E. and Metropolitan Section, A.S.M.E.

Philadelphia.

October 26. At the Engineers' Club. Speaker: Albert Kingsbury of Pittsburgh. Subject: "Bearings."

Providence.

October 5. At Providence Engineering Society Rooms. Subject: On Management.
October 19. General Society Meeting.

Washington State.

October 1. At the Engineers' Club. Speaker: Prof. H. V. Carpenter of State College of Washington. Subject: Thermal Conservation.

very best type. This feature of the program should not take over forty-five minutes.

- 6 A half hour might also be devoted to entertainment features and refreshments at the closing.

Members in each city where one of the simultaneous meetings will be held will receive further information from the executive committee of the Local Sections as soon as the arrangements are completed.

GENERAL NOTES

Several Local Sections have completed their programs for the season, including dates, subjects, and in some cases have also obtained speakers.

Joint meetings with other national and local Engineering societies and with the A.S.M.E. Professional Sections are being arranged in a number of places.

Altogether the promise of a real, live successful season is better at this early date than ever before in the history of the Society, and it is hoped that every member will enter into the spirit of the times and contribute (at least by his attendance at meetings) to the success of the work which is being done for the advancement of the best interests and the highest ideals of the engineering profession.

The American Society of Civil Engineers held a meeting on

Wednesday, September 15, to which a special invitation to attend was given to members of The American Society of Mechanical Engineers. The Speaker of the evening was Mr. John R. Freeman, Past-President of our Society and a member of the A. S. C. E. His subject was Recent Engineering Developments in China and the Far East. Mr. Freeman illustrated his lecture with a number of beautifully hand-painted lantern slides. A large group of members of the Society residents in the Metropolitan Section showed their appreciation of the spirit of coöperation of our sister Societies by their attendance. The Metropolitan Section hopes to have several meetings with the other sister engineering and technical societies in the district during the coming year.

A more detailed account of Mr. Freeman's talk will be found on page 593 of Part One of this issue.

Recent Section Meetings

CONNECTICUT:

NEW HAVEN BRANCH:

September 8. Business meeting was held. Committee on Meetings appointed.

MERIDEN BRANCH:

September 8. Business meeting was held at "The Home Club." Committees appointed.

PHILADELPHIA:

September 28. Outing at McCall Field, Highland Park. Brief address by Dr. Rosa of Washington.

Constitutional Amendments Mailed to Membership

Two amendments to the Constitution were presented at the Spring Meeting in St. Louis this year, and as required by the Constitution, are being mailed this month to all members of the Society entitled to vote, in accordance with the requirements of the Constitution.

The first of these is to extend the privilege of voting to include Junior members. It was presented by Mr. Morris L. Cooke on the argument that in all business, religious or social organizations, a man secures all his privileges and assumes all his responsibilities by the time he is twenty-one years old, and that in other professional societies, such as those of doctors, lawyers and architects, membership implies full privileges. Mr. Cooke made an analysis and found that over 75 per cent of our present Juniors are graduates of colleges or technical schools. The average age of those now Juniors was over 25 years at the time they joined the Society. Their present average age is nearly 29 years, and both the median and nodal ages are over 27 years. Only 23 per cent of our members are juniors, and of these only 8 per cent are below 27 years, at which age associates vote.

He considers that the practice would influence graduate engineers to join the Society on graduation as a logical next step in the development of their professional status, and of even greater importance it would get our younger men into the habit of active and full participation in Society affairs.

Mr. Cooke's amendment is:

PRESENT FORM

C-6. The membership of the Society shall consist of Honorary Members, Members, Associates, Associate Members, and Juniors. Honorary Members, Members, Associates and Associate Members are entitled to vote and to hold office. Juniors are not entitled to vote nor to hold office, but are entitled to all the other privileges of membership.

C-7. Honorary Members, Members, Associates and Associate Members are entitled to vote on all questions before any meeting of the Society, in person, or by a proxy given to a person entitled to vote. A proxy shall not be valid for a greater time than for six months.

The second amendment was proposed by President Miller, and its principal objects are to virtually make the matter of proposing an amendment to the Constitution a little more formal by calling for the signatures of twenty members, and secondly to

PROPOSED AMENDMENT

C-6. The membership of the Society shall consist of Honorary Members, Members, Associates, Associate-Members, and Juniors.

C-7. Honorary Members, Members, Associates, Associate-Members, and Juniors are entitled to vote on all questions before any meeting of the Society, in person, or by a proxy given to a person entitled to vote. A proxy shall not be valid for a greater time than for six months.

PRESENT FORM

C-57. At any Semi-Annual Meeting of the Society any person entitled to vote may propose in writing an amendment to this Constitution. Such proposed amendment shall not be voted at that meeting but shall be open to discussion and such modification as may be accepted by the proposer. The proposed amendment shall be mailed in printed form by the Secretary to each person entitled to vote, at least sixty days previous to the next Annual Meeting, accompanied by comment by the Council, if it so elects. At that Annual Meeting such proposed amendments shall be presented for discussion and final amendment and shall subsequently be submitted to all persons entitled to vote, provided that twenty votes are cast in favor of such submission. The final vote on adoption shall be by sealed letter ballot, closing at 12 o'clock noon on the first Monday of March following.

C-58. The letter-ballot accompanied by the text of the proposed amendment, shall be mailed by the Secretary to each person entitled to vote, at least thirty days previous to the closure of the vote. The ballot shall be voted, canvassed, and announced as provided in the By-Laws. The adoption of the amendment shall be decided by a majority of the votes cast. An amendment shall take effect on the announcement of its adoption by the Presiding Officer of the Semi-Annual Meeting next following the closure of the vote. Any changes in the order or consecutive numbering of existing articles of the Constitution made necessary by such adopted amendment, shall be made under the direction of the Council.

Both these amendments will come up for discussion and final amendment at the Annual Meeting in December, and will subsequently be submitted for ballot to all members entitled to vote and the ballot canvassed and announced at the Spring Meeting in Chicago in 1921.

PROPOSED AMENDMENT

C-57. At any General Meeting of the Society any person entitled to vote may propose in writing an amendment to this Constitution, provided that the proposer shall have secured the written signature of at least twenty members approving the proposed amendment. Such proposed amendment shall not be voted on at that meeting but shall be open to discussion and to such modification as may be accepted by the proposer. If the proposed amendment as originally written or as changed or modified with the consent of the proposer is again indorsed by twenty or more members, who may or may not be the original indorsers, it shall be mailed in printed form by the Secretary to each person entitled to vote, at least sixty days previous to the next General Meeting, accompanied by comment of the Council, if it so elects. Ballots shall be sent with the proposed amendment. The voting shall be by sealed ballot and the voting shall close at noon of the first day of the General Meeting following the mailing.

C-58. The ballots shall be voted, canvassed and announced as provided in the By-Laws. The adoption of the amendment shall be decided by a majority of the votes cast. An amendment shall take effect on the announcement of its adoption by the Presiding Officer at the same General Meeting. Any changes in the order or consecutive numbering of existing articles of the Constitution made necessary by such adopted amendment, shall be made under the direction of the Council.

PERSONALS

NEWMAN COMFORT has resigned his position of manager of the Maryland branch, National Workmen's Compensation Service Bureau, to accept a position with the Maryland Casualty Company, as manager of the Casualty department in their Chicago branch office.

RAYMOND A. COLE has severed his connection with the Hayes Wheel Company, where he was employed as efficiency engineer, and has accepted a position of similar nature with the Motor Wheel Corporation, Lansing, Mich.

ARTHUR A. MERRY, formerly production manager, Pratt & Whitney Co., Hartford, Conn., has accepted a similar position with the General Fuel Saving Corporation of Rochester, N. Y.

C. WILLIAM BAYNE, industrial engineer, formerly with the Ford Motor Company, and Timken Detroit-Axle Company, of Detroit, Mich., is now production manager for the F. C. Austin Machinery Corporation, Muskegon, Mich.

O. L. MERKT, who has been associated for the past 15 years with Westinghouse, Church, Kerr & Company, New York, has resigned and is now connected with the American Can Company, in the capacity of assistant chief engineer, with headquarters in New York, N. Y.

O. L. MCINTYRE has been transferred from the home office of the Fuller Engineering Co., Allentown, Pa., to Milwaukee, Wis., to superintend the erection of a 1000-ton per day pulverized coal installation at the Lakeside Power Plant of the Milwaukee Electric Ry. and Light Co., for which the Fuller Engineering Co. has the contract.

C. B. LORD has assumed the duties of works manager for the Advance-Rumely Company at Battle Creek, Mich.

F. W. DEAN, formerly mill engineer and architect of Boston, and for nearly three years in war work for the United States Shipping Board Emergency Fleet Corporation, in charge of the steamship boiler department, and testing of boilers, has resigned his position. Mr. Dean has become associated with L. N. Wheelock and J. C. Bogue, formerly the firm of the Wheelock-Bogue Co., Boston, under the firm name of Wheelock, Dean and Bogue, Inc., which organization will be the New England agent for the Erie City Iron Works, of Erie, Pa., and of several other companies. The offices of the new organization are in Boston, Mass.

R. LAURENCE WELDON has recently left the engineering department of The Lauretide Company of Grand Mere, Que., to join the Fort Frances Pulp and Paper Company of Fort Frances, Ontario, as resident engineer in charge of engineering and construction work.

A. G. CHRISTIE, chairman Code of Ethics Committee of this Society and a member of the Publications Committee, formerly associate professor of mechanical engineering, Johns Hopkins University, Baltimore, Md., has been appointed professor of mechanical engineering of the Night Technical Schools of Johns Hopkins University.

C. C. THOMAS, formerly professor of mechanical engineering, Johns Hopkins University, Baltimore, Md., has opened a consulting engineering office in Los Angeles, Cal.

C. H. VICKERS is now designer and draftsman with Moore Steam Turbine Corporation of Wellsville, N. Y. He was formerly with the Walworth Manufacturing Company, Kewanee, Wis.

F. VAN BUREN CONNELL has accepted a position as sales engineer for the Automatic Fuel Saving Company of Philadelphia, Pa.

J. R. LOWE has been transferred from the New Orleans to the Anderson, Ind., Plant of the Midwest Engine Company. He is sales engineer for the Hill Pump Works Division.

R. E. CHANDLER has resigned his position as professor of mechanical engineering at the University of Florida to accept a similar position at the University of Idaho, Moscow, Idaho.

EDWARD G. JAY, Jr., who has been Hull Fittings Engineer in charge of design and specifications for ships building by the American International Ship Building Corporation at Hog Island, has completed that work and has been appointed executive engineer on the staff of the senior vice-president.

ELIAS SCHLANK, formerly assistant mechanical superintendent for Julius Kayser Co., Brooklyn, N. Y., is now located in Newark, N. J., as a consultant factory engineer.

JAY CARROL WHEELER, who has been associated with Kerr Turbine Co. as construction engineer for the past ten years, has resigned to become construction engineer for the C. H. Wheeler Manufacturing Co. of Philadelphia, Pa.

LELAND H. SMITH, formerly secretary and treasurer for the Independent Oil Co., Decatur, Ill., is now coordinator for the Power Laundry Cooperation Course, Ohio Mechanics Institute, Cincinnati, Ohio.

HARRY T. HARMON is now transmission engineer for the Hyatt Roller Bearing Division, General Motors Corporation, Newark, N. J.

RICHARD GROSHOLZ is now with the Bodenhausen Co., Cornwells, Pa., having completed his work as estimator for the N. Y. Shipbuilding Corporation, Camden, N. J.

C. B. COLE has resigned his position as manager of the Chicago store of the Union Twist Drill Co. and will become general sales manager of the W. L. Romaine Machinery Co., Chicago, Ill.

RICHARD H. MULLINER, formerly with The Porter-Cable Machine Co., is now associated in business with Mulliner Brothers of Syracuse.

HERMAN B. SCHARNBURG has resigned his position with the Haitian American Corporation and has taken the position of chief engineer with the Palma Sugar Co., Central Palma, Oriente, Cuba.

EDWARD J. FISHER, formerly industrial management engineer, Columbia Graphophone Manufacturing Co., Bridgeport, Conn., is now factory manager, U. S. Auto Gear Shift Co., Eau Claire, Wis.

CLAYTON O. SMITH, formerly sales manager, Norton Grinding Co., Worcester, Mass., is now treasurer and general manager of the O. S. Walker Company of Worcester.

IRVING C. BAKER is now plant engineer for the Maryland Motors Corporation, Laurel, Md.

HARVEY J. POWELL, formerly student engineer, Turbine Research Station, General Electric Company, Lynn, Mass., is now employed as mechanical draftsman by the Newport News Shipbuilding and Dry Dock Company, Newport News, Va.

G. B. RICE has resigned as assistant works manager, Merchant Shipbuilding Corporation, Harriman, Pa., and accepted a position with T. Shriver & Company, Harrison, N. J.

HERBERT HIGGINBOTTOM, JR., is now associated with the Arthur Knapp Engineering Corporation as assistant engineer in its Detroit office. He was formerly tool and gage designer of the Packard Motor Car Company.

J. INMAN EMERY, formerly manager Messrs. Vickers, Ltd., Ordnance Factory, Erith, Kent, England, is now with The Austin Motor Co., Ltd., Longbridge Works, Birmingham, England.

JOHN T. ARKISON, formerly general manager Arkison & Smith Co., Bridgeport, Conn., is now superintendent of the plumbing and heating department for D. K. Allen, Greenwich, Conn.

GEORGE R. WOODS, who has been manager of the New York office of R. S. Stokvis & Zonen, Ltd., is now president of Alliance Transportation Co., Inc., of New York.

J. H. FIGEE has severed his connection as engineer with the Steere Engineering Company of Detroit and is now affiliated with the Ford Motor Company in the Rouge Plant at Dearborn, Mich.

J. L. LOONEY, formerly mechanical engineer, Globe Machinery & Supply Co., Des Moines, Ia., is now employed by Miller, Franklin, Basset & Co., of New York.

FELIX J. WASILKOWSKI announces change of position from experimental engineer of Tottle & Bailey's Manufacturing Company, to the Empire Art Metal Company, Inc., College Point, N. Y., in a capacity of assistant to works manager. His duties will consist of designing machinery, tools and general factory equipment, also general safety engineering work and all order data pertaining to the mechanical division.

E. W. BLUE, formerly Scovell, Wellington & Co., Boston, Mass., is now in the mechanical department of the Case School of Applied Science, Cleveland, Ohio.

ARTHUR L. BROWN is now in the office of superintendent, Lincoln Motor Co., Detroit, Mich., having given up his former position with the Small Arms Division, Ordnance Office, U. S. A.

WALLACE J. CROSS, formerly with The Island Refining Corporation, New Orleans, La., is now construction engineer, Pierce Oil Corporation, Fort Worth, Texas.

GEORGE B. MALONE, general manager of the K. G. Welding & Cutting Co., New York City, has recently taken charge of the Philadelphia office of the Company.

CHARLES A. STOLBERG, while in army Major, Ordnance Dept., U. S. A., is now engaged in industrial brokerage in Canton, Ohio, dealing in real estate and investments.

The Clark-Mesker Company has recently been incorporated for the purpose of taking over the Machine Tool Department of The Cleveland Milling Machine Company. D. B. CLARK, president, is also general manager of The Cleveland Planer Company and The Cleveland Machine Tool Company, was formerly superintendent of Watervliet Arsenal during the war, and is a well-known factor in the machine tool industry. L. H. MESKER, vice-president and general manager, has been in machine tool business for a good many years. He

was formerly connected with Motch & Merryweather Machinery Company, Manning, Maxwell & Moore, Inc., and more recently with Kearney & Trecker of Milwaukee.

LOUIS SEUTTER has resigned his position as assistant engineer with the U. S. Forest Products Laboratory, Madison, Wis., and is now associated with W. H. Coye, Counsel for the furniture industry, Grand Rapids, Mich.

I. A. BAUM, formerly assistant general manager for the La Salle Engineering Company of Chicago, Ill., will in the future have only an inactive interest in the La Salle Engineering Company. Mr. Baum is now vice-president of the American Rotary Engineer Company, Grand Rapids, Wis.

S. C. SHIPLEY has severed his connection with the University of Minnesota and has become associated with Robert College, Constantinople, as professor of mechanical engineering.

CHARLES A. SIPE, formerly with The Aluminum Rolling Mill Company, Cleveland, Ohio, now has charge of efficiency work at the U. S. Aluminum Co., Maryville, Tenn.

N. E. HILDRETH has resigned as superintendent of the Cushman Motor Works, Lincoln, Neb. and has become works manager of the Witte Engine Works, Kansas City, Mo.

WM. E. LAWRENCE has been transferred from the Marlin-Rockwell Corporation, New Haven, Conn. to the Standard Steel and Bearing Company's Division at Plainville, Conn., as supervisor of the gage department.

WALTER C. LANGE has resigned his position as engineer with the Hammel Oil Burning Equipment Co. and now holds a similar position with The Howard Moore Company of New York City.

CHARLES S. DAHLQUIST has resigned his position as chief engineer of the Timken-Detroit Axle Company, Detroit, Mich., to become director of engineering of The Eaton Axle Company, the Axle Division of the Standard Parts Company, Cleveland, Ohio.

R. A. WURGEL has resigned as inspecting engineer for the Foamite Firefoam Company to become associated with the Oil Insurance Association as fire protection engineer and special agent in fire insurance rating, operating in the Mid-Continental oil fields.

A. W. HUSEBY, formerly chief engineer, Armour Mechanical Co., U. S. Yards, Chicago, Ill., is now in the master mechanic's office of Morros & Company, Chicago, Ill.

GEORGE H. COOPER has severed connections with the H. T. Paiste Co. of Philadelphia, Pa., where he was mechanical superintendent, and is now superintendent of the Merit Machine Manufacturing Corporation of New York.

RALPH W. FANNON has resigned his position as chemical engineer with the Wausau Sulphate Fibre Co., Mosinee, Wis., and is now connected with the Management Engineering and Development Co. of Dayton, Ohio.

B. G. WELCHANS, formerly general superintendent of the Stanley G. Flagg Company, Pottstown, Pa., is now plant manager for the Detroit Valve and Fittings Company, Wyandotte, Mich.

JAMES C. RYDER is now chief engineer for the Zieley Syndicate of New York.

HARRY N. BECKER is now connected with The Pyrites Company, Ltd., Wilmington, Del.

M. P. MATTHIAS, who is with the Foamite Firefoam Company, has been transferred from Richmond, Va. to New York City.

HOWARD W. AUMACK, formerly assistant production manager of the Slocum, Auram, Slocum Laboratories of Newark, is now in the engineering department of The Intertype Corporation of Brooklyn, N. Y.

Among the newly elected officers of the Illuminating Engineering Society, who will assume office in October, are General GEORGE H. HARRIES and SAMUEL E. DOANE. General Harries has been prominent in the electrical field for over twenty-five years, engaging in electrical engineering and construction, especially in public utility work, and holding important offices in various electrical societies and companies. Mr. Doane, also well-known in the electrical field, has specialized in standardization work, one of his papers on this work being instrumental in the establishment of the Bureau of Standards. General Harries, as new president of the Illuminating Engineering Society, and Mr. Doane, as junior past-president, will both serve on the Council of the Society for the coming year.

WILLARD L. CASE, consulting engineer for the Willard Case & Co. of New York, has been elected treasurer of the Yale & Towne Manufacturing Company, Stamford, Conn.

EUGENE SZEPESEI, formerly senior engineer for the Cooley & Marvin Company, Boston, Mass., has organized the Szepeesi Industrial Organization to render professional service to manufacturers on industrial engineering and industrial economics.

W. N. DICKINSON has been elected president of the New York Electrical Society to succeed Edwin B. Katte. Mr. Dickinson is a consulting engineer and has been associated with several elevator companies, principally the Otis Elevator Company. During the war he was engaged in war work at Washington.

LEWIS E. SUMMERS has accepted a position with the Keller Pneumatic Tool Co., as works manager of the Grand Haven, Mich., plant.

WALTER RAUTENSTRAUCH, professor of mechanical engineering, Columbia University, has recently joined the J. C. White organizations as vice-president of The Management Corporation, in charge of industrial properties.

An announcement in the August issue of MECHANICAL ENGINEERING of the enlargement of the Charles T. Main organization named Mr. Gunby and Mr. Cole as associates of Mr. Main. Other members of the Society who are also associated with this organization are WILLIAM FRANK UHL, as hydraulic engineer, and CHARLES R. MAIN, as special assistant.

LOUIS H. BLOOD has resigned as chief engineer of The Oesterlein Machine Co., and has opened an office in Cincinnati as designing engineer, specializing on the design of standard and special machine tools.

WM. G. R. BRAEMER, who is erroneously listed in the 1920 Year Book as president of the Braemer Air Conditioning Corporation of Philadelphia, Pa., is a member of the Braemer Engineering Company, consulting engineers and specialists in air conditioning and drying, Philadelphia and Baltimore.

C. W. WILLETTTE, after many years of investigation and study of the requirements on the Pacific Coast, has brought out an entirely new type of saw-mill machinery, and has concluded a contract with the Puget Sound Machinery Depot, of Seattle, Wash., for the manufacture of this machinery, in connection with their own, under his personal supervision as chief engineer of the Milling Department. Mr. Willette is located in Portland, Ore.

CHARLES EISLER, an expert incandescent lamp equipment engineer, has entered the consulting engineering field, and is now devoting his time to designing and developing special and automatic machines for the manufacture of standard, miniature and gas filled lamps. The organization will also maintain a well equipped department for manufacturing wire product used in the incandescent lamps, for which now the very latest machines are being developed and installed.

WALLACE E. TILLINGHAST, managing owner, Massachusetts Steam Specialty Company, will be in direct control and supervision of the department of diplomatic and advisory engineering which that company has recently organized.

WILLIAM D. ENNIS announces his resignation as professor of mechanical and marine engineering in the Postgraduate School of the U. S. Naval Academy to become vice-president of the Technical Advisory Corporation of New York. Mr. Ennis has been associated with the latter corporation since its organization and will hereafter be located at its general offices in New York City.

GERARDO IMMEDIATO has been appointed professor in charge of machine and power-plant design at the Polytechnic Institute of Brooklyn.

MILTON C. STUART, formerly senior mechanical engineer at U. S. Naval Engineering Experiment Station, Annapolis, Md., has been appointed professor of mechanical and marine engineering at the Naval Postgraduate School, Annapolis, Md.

A. A. POTTER has resigned his position as dean of engineering at the Kansas State Agricultural College to accept a similar position at Purdue University, Lafayette, Ind.

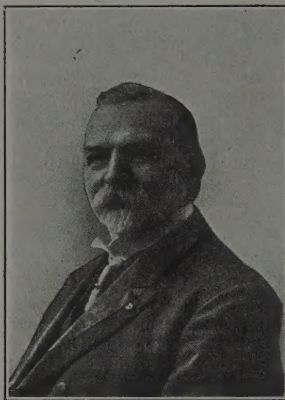
E. A. HITCHCOCK, formerly vice-president of the Bailey Meter Company of Cleveland, Ohio, is returning to Ohio State University at Columbus, Ohio, where he spent several years. He has been appointed dean of the Engineering College.

The Combustion Engineering Corporation announces the appointment of HENRY KREISINGER, formerly of U. S. Bureau of Mines, as engineer of research. Mr. Kreisinger will conduct investigations for the Combustion Engineering Corporation of a similar nature to those that he conducted for the Government; and the results of his work will be available to the Government as well as to the clients of the Corporation. He will make his headquarters at the Bureau of Mines Station at Pittsburgh. The first problem which he will consider will be a thorough testing of the powdered-coal plant of the Bureau of Mines at Milwaukee, Wis.

NECROLOGY

WILLIAM M. BARR

William M. Barr, who joined the Society in the year of its foundation, 1880, died on July 27, 1920. Mr. Barr was born in November 1842, in Muncy, Pa. He received the degree of mechanical engineering to which profession he devoted his life. Mr. Barr served in the Navy throughout the Spanish and Civil Wars. He is well known



WILLIAM M. BARR

in the world of technical literature for his works on Pumping Machinery, Boilers and Furnaces, Combustion of Coal, etc. His chief work is Barr's Industrial Engineering, a Handbook of Useful Information for managers, engineers, superintendents, designers, draftsmen and others engaged in constructive work, Part I of which was recently issued. Part II is in preparation for early publication.

Mr. Barr was also a member of the American Society of Naval Engineers.

SAMUEL H. EDWARDS

Samuel H. Edwards, manager of the Tide Water Oil Co., Bayonne, N. J., died on August 4, 1920, of heart trouble. Mr. Edwards was born in Pottsville, Pa., on January 12, 1858. He was educated in the grammar schools of Albany, N. Y., and at an early age started work for his father, who was a pioneer oil refiner in that city. He later went to Williamsport, Pa., where a refinery was erected of which his father was superintendent.

Mr. Edwards was in the service of the Tide Water Oil Company interests for 38 years. He entered the employ of the Chester Oil Company in 1882, and was sent to take charge of the can and case department of Lombard, Ayres & Company at Bayonne, N. J., in 1888. Later that same year the Chester Oil Co., the Lombard Ayres Co., and several other oil companies were merged in one under the name of Tide Water Oil Company. In 1890 he was sent to superintend the erection and operation of the iron-ore mines for the Benson Mines Company, New York. In 1897 he returned to the Tide Water Refinery as mechanical superintendent. In 1901 he was sent to superintend the shipyard of Townsend and Downey Shipbuilding Company at Shooters Island, N. Y. In 1903 he again returned to the Tide Water Refinery resuming the position of mechanical superintendent. In 1906 he started the building of oil-pipe lines and pump stations for the Tide Water Pipe Company from Bradford, Pa., to Stoy, Ill. He finished this work in 1909, returning to the Refinery at Bayonne. Upon the death of his brother Frank W. Edwards in 1911, he was appointed general superintendent of the Bayonne Plant, being advanced in 1917 to position of manager. He was also a member of the Board of Directors of the Company.

Mr. Edwards became a member of the Society in 1912. He belonged to a number of clubs and was interested in the civic affairs of Bayonne.

JOSEPH W. HARTMAN

Joseph W. Hartman was born in Lyons, N. Y., on April 8, 1890. He received his education at the Lyons Union School and was graduated in 1912. He then entered Rensselaer Polytechnic Institute, from which he received his M. E. degree in 1916. His first professional work was with the Cambrai Steel Co. at Johnstown, Pa., where he spent one year. He was with the Corning Cut Glass Co. for three years and in May, 1920, entered the employ of the Gleason Works, Rochester, N. Y., where he was located at the time of his death.

Mr. Hartman, who became a junior member of the Society in 1917, met death very suddenly by drowning in Sodus Bay, N. Y., on July 3, 1920.

JAMES AMORY HERRICK

James A. Herrick, who died at Merrimack, N. H., on September 10, 1920, was born in Nashua, N. H., on January 17, 1850. Mr. Herrick was educated in Boston schools and attended the Massachusetts Institute of Technology, from which he was graduated in 1872. The following year he took a post-graduate course.

His first work was with the former Nashua Iron & Steel Co., as chemist. Later he had charge there of the production of steel. In this connection he used the first Siemens gas producer, imported from England in 1866, employing the principle of the direct gasification of coal for fuel to melt the steel. Later he went to Pittsburgh, Pa., and for a number of years was engaged in similar lines of work in the steel industry of that city.

He became greatly interested in the possibilities of gas made directly from coal for fuel purposes, and entered this field on his own account in 1886, in which he continued until 1918, when he retired from active business. Mr. Merrick was a prolific inventor in his chosen work, having taken out about forty patents, besides many foreign ones. He was rated as the dean of the producer-gas business in this country and had installed many important fuel and power plants, using producer gas for fuel.

Mr. Herrick was one of the earliest members of the Society, joining in the year of its foundation, 1880.

HOMER N. MOTSINGER

Homer N. Motsinger, industrial and mechanical engineer, Chicago, died on August 13, 1920. Mr. Motsinger was born on March 16, 1875, in Pendleton, Ind. He received his early education in the schools of Shoals, Ind., and later he entered Purdue University where for three years he studied electrical engineering. From 1900 to 1916 Mr. Motsinger was vice-president and general manager of the Motsinger Device Manufacturing Co. At the close of that period he entered professional engineering work in which he was engaged for two years when he became works manager of the U. S. Ball Bearing Manufacturing Co. in charge of all production and design of special machines and tools. Early in 1920 Mr. Motsinger opened consulting offices in Chicago, and was actively interested in this field of work at the time of his death.

Mr. Motsinger became a member of the Society in 1919. He was also a member of the Society of Automotive Engineers and a charter member of the Society of Industrial Engineers. He was much interested in and belonged to several fraternal organizations.

ALBERT ROBOSON SHIPLEY

Albert R. Shipley, production superintendent of Old Line Products, died on February 15, 1920. Mr. Shipley was born on April 20, 1876, in Alpha, Md. He attended school in Baltimore and was graduated from both the McDonough and the Maryland Institutes of that city. He was a machinist with the Tabor Manufacturing Co., Philadelphia, at the time that Frederick W. Taylor was successfully working out in practice there the principles of his system of scientific management. His association with Mr. Taylor continued over seven years.

After serving the New England Butt Co., the Seth Thomas Clock Co. and the Sentinel Manufacturing Co. in industrial engineering and executive capacities, he was called by the Government in August, 1916, to become superintendent of production at the Watertown Arsenal. In January, 1918, Mr. Shipley joined the industrial engineering department of the Winchester Repeating Arms Co. and remained with that department until his appointment in October to Old Line Products department of the company.

Mr. Shipley became an associate of the Society in 1912. He was also a member of the Taylor Society and belonged to several fraternal organizations. He frequently lectured on scientific management in which he was regarded as an authority in view of his work under the immediate direction of Mr. Taylor.

OROSCO CHARLES WOOLSON

Orosco C. Woolson, designing engineer and manufacturer, New York City, died on July 2, 1920, of heart failure. Mr. Woolson was born in Cuba on May 14, 1848. He received his early education at private schools in Massachusetts and later attended the Worcester Military Academy. From 1865 to 1869 he served an apprenticeship with the Hewes & Phillips Iron Works, Newark, N. J. He was associated for short periods with the John Cooper Engineering Works, Mt. Vernon, Ohio, as draftsman; the United States Government as draftsman on the Emery testing machines; the New York Elevated Railroad as inspector of construction; the Babcock & Wilcox Co. as draftsman, and the National Water Tube Boiler Co. as manager.

In 1893 Mr. Woolson established an engineering business in New York City specializing in designing and construction of combustion apparatus, power-boiler equipment and furnace accessories. At the time of his death he was also eastern representative of the Automatic Furnace Co., Dayton, Ohio.

Mr. Woolson became a member of the Society in 1886. He was also a member of the New York Railroad Club and the Board of Trade, Newark, N. J.

EMPLOYMENT BULLETIN

THE SECRETARY considers it a special obligation and a pleasant duty to make the office of the Society the medium for assisting members to secure positions by putting them in touch with special opportunities for which their training and experience qualify them, and for helping any one desiring engineering services. The applications listed below combine the services of the Society and of the Engineering Societies Employment Bureau, Engineering Societies Building.

POSITIONS AVAILABLE

Stamps should be inclosed for transmittal of applications to advertisers; non-members must accompany applications with a letter of reference or introduction from a member; such reference letter will be filed with the Society's records.

MANUFACTURING EXPERT with 12 to 15 years' experience on quantity production of small interchangeable parts. Must be familiar with construction and operation of commercial manufacturing machinery, and capable of designing special process machinery. Location Middle West. Z-243.

SUPERINTENDENT; factory in New England manufacturing small machinists' tools, at present employing about 200, but with excellent prospects for increase, has position for superintendent, who is anxious to firmly and permanently establish himself and who has ability to eventually assume full charge of manufacturing end of business. Requirements: familiarity with production of similarly accurate small pieces of high quality; proven ability in handling employees; proven ability in mechanical lines with reference to standard and special machinery for efficiently doing work. When applying give full information and especially full detailed record of past employment. Z-394.

MACHINE DESIGNERS to go ahead and design machines from ground up when furnished with necessary data on requirements. Would be called upon to design fine tool machines. Location Mass. Z-424.

CHIEF DRAFTSMAN for industrial layout and general office work. Location New York City. Z-434.

DESIGNER experienced in making working drawings for work on portable life-saving apparatus, similar to fire trucks. Location New York City. Z-530.

SALES ENGINEER AND INSIDE MAN to handle secretarial work for concern manufacturing outdoor substation equipment for electric power companies. Two openings. Salary about \$200 per month. Location Pennsylvania. Z-537 A & B.

INDUSTRIAL PHYSICISTS. An established research laboratory of well-known manufacturer offers positions to qualified scientific men who have research ability. One or two men of scientific training in physics and experience in research are desired. There is also position open for physicist with less experience but with creative ability. Working conditions are attractive and positions are permanent. Location Ohio. Z-558.

CONSULTING ENGINEER experienced in production of chilled car wheels. Foundry experience on chilled wheels essential. Z-984.

DESIGNER for large textile products manufacturer; special machinery and apparatus and small structures together with the study of factory operation from an engineering point of view. Location New York. Z-1871.

TWO FIRST CLASS LOCOMOTIVE DESIGNERS; will arrange personal interview if within reasonable traveling distance. Location Pa. Z-1895.

ASSISTANT CHIEF ENGINEER, technical graduate, to supervise engineering and drafting-room details in tractor design. Must have thorough engineering and shop experience, and be capable of handling men. Location California. Z-1899.

POWER ENGINEER to take charge of industrial power plant. Good knowledge of boiler-room economics necessary. Technical knowledge required, but need not be graduate. Must also supervise maintenance and operate refrigerating plant. Location Portsmouth, Va. Z-1908.

MECHANICAL ENGINEER with cement mill experience on design and construction. Must be a hustler. Good opportunity. Location Middle West. Z-1910.

INSTRUCTOR to teach mechanics and motor-engine repairs. Technical graduate preferred. Must speak Spanish. Location Lima, Peru. Z-1912.

INSTRUCTOR in mathematics. Location State of Washington. Z-1915.

HEATING AND VENTILATING ENGINEER. Must speak and write Spanish. Location South America. Z-1924.

CONSULTING ENGINEER for company of industrial engineers. Theory of engineering is more important than practical experience. Location Buffalo, N. Y. Z-1926.

SALES ENGINEER to sell power-house equipment in Detroit. Attractive proposition to experienced man. Give full history and earning capacity in reply. Location Michigan. Z-1931.

ASSISTANT TO CHIEF ENGINEER. Man with good engineering education and not less than ten years' experience in design and operation of large steam-power plants, preferably one who has had training in large metal-working establishments and is familiar with furnaces, gas producers and metal-working machinery and practice. Location Pittsburgh, Pa. Z-1934.

OPERATING SUPERINTENDENT, experienced in handling P. & W. boilers, Curtis horizontal turbines, motor-generator-sets, 120-ton electric locomotives operating on 2400 volts d.c. Only experienced men need apply. best of references required; state full particulars in first letter as to age, experience and when available. Location Chile, South America. Z-1940.

SALESMAN for lubricating oils in foreign fields. Men who are thoroughly familiar with marketing abroad in general, even though they have no lubricating-engineering training. Z-1949.

ASSISTANT FACTORY SUPERINTENDENT for company operating several factories in East. Must be technical graduate or have at least three years' practical experience. Work consists partially of factory superintendence and sales. Some knowledge of mechanical drawing necessary. Excellent chance for advancement. Business is that of sheet-metal building materials. Location Jersey City, N. Y. Z-1956

MECHANICAL ENGINEER. Young man to maintain and construct steam power-plant equipment in chain of food-production plants in Illinois, Wisconsin and Canada. Later on will also assist in equipping new factories. Shop experience essential, technical training preferred. Good opportunity with promotion assured. Prefer man who is just emerging from shop apprenticeship, subsequent to his technical training. Older men, however, of exceptional experience will be considered, at possibly higher salary, provided they have first-class executive ability. Location Illinois, Wisconsin, and Canada. Z-1965.

BOILER SALESMAN, preferably one handling horizontal return tubular boilers at present. To work either on salary and commission, or straight commission basis, in New York market. Good opportunity for thoroughly experienced boiler salesman, one who can get results with line manufactured to Massachusetts Standard. Location New York. Z-1975.

TIME-STUDY MAN experienced for machine-shop work. Must understand men. Good opportunity for right man. Location New York. Z-1980.

MECHANICAL ENGINEER with one or two years' experience. M. I. T. graduate preferred. Not over 27, clean, straight American, of superior moral character, and one whose record at the Institute and since is first-class. Regular college course prior to his engineering training would be advantageous. Prefer man who has been in military or naval service and secured commission as Captain in the army or Lieutenant in the navy. Must be willing to go abroad if so desired. Location Massachusetts and abroad. Z-1981.

TECHNICAL AND DRAFTING ASSISTANT. Service Dept., large motor-car company. Work approaches special industrial engineering as applied to service work, covering service station and truck-garage layouts, making of special tool and other drawings, technical data and service repair, instruction and editorial work, and such other special problems as may arise. Especially suitable for a recent technical graduate good at drafting and interested in organization, production and administrative problems of automobile service repair business. Location N. Y. State. Z-1983

BUSINESS MANAGER. Young man of strong character and ability. Experienced in abrasive manufacture and sales. Great opening for permanent connection, but for high-class man only. Location Pennsylvania. Z-1986.

POWER-PLANT OPERATING ENGINEER on turbines, triple-expansion condensing engine, air compressors, generators and motors. Mechanically-fired boilers, some grate stokers. Output of plant 2000 k.w. Permanent. Position with good surroundings for qualified man. Location Missouri. Z-1990.

ENGINEER with some petroleum experience for testing and special field work. Must be technical graduate. Opening may lead to executive position. Location Mexico. Z-2002.

INSPECTOR to report progress on manufacture of oil-refinery equipment, including special boiler-shop fabrication, castings, etc. Technical education and considerable experience with material. Also good knowledge of shop practice. Will represent company and deal with manufacturers in engineering problems. Headquarters New York City. Z-2003.

INSPECTORS, several, technically trained for railroad-equipment tests. Prefer men with some experience in industrial or shop work, but not essential. Work in department consists of testing in laboratory and on road various devices, and changes in locomotive and car construction which are under consideration for standard. As a rule the trial includes development of device under test and, therefore, offers good opportunity for display of ability. Location Pennsylvania. Z-2004.

COMBUSTION ENGINEER, mechanical engineering graduate thoroughly familiar with mechanical stokers. Should have pleasing personality and be capable of conducting boiler tests and assuming responsibility. Work in connection with combustion problems. Location Detroit, Mich. Z-2009.

ENGINEER experienced in sugar industry, preferably cane, competent to make calculations and pass on engineering questions in connection with design of cane-sugar factories. Not a drafting job. What we need is man with good engineering knowledge who is capable of making calculations for a cane-sugar factory. Location New York. Z-2010.

POWER-PLANT SUPERINTENDENT to take charge of large factory power plant. Technically trained. Location Mass. Z-2021.

ENGINEER for research work on problems of employment relation. Practical experience in industry and training in economics required. Location New York City. Z-2029.

YOUNG MAN, preferably technical graduate with 2 or 3 years' shop experience; to take up time study and job analysis. Work would cover wide variety of operations, in a plant of 6000 men. Give complete details in first letter. Location Massachusetts. Z-2030.

FURNACE ENGINEER having experience in design, construction and operation of large industrial furnaces. Excellent opportunity for high class man. Location Ohio. Z-2036.

MASTER MECHANIC, experienced in manufacture of gold-filled watch cases. Location Ohio. Z-2039.

GENERAL INSPECTOR on manufacture of gold-filled watch cases, to look after general quality of work. Location Ohio. Z-2040.

DESIGNER for steam and electric-power plants, not drafting position. Must be able to make calculations on power-station design and eco-

MEN AVAILABLE

Only members of the Society are listed in the published notices of this section. Copy for notices should be on hand by the 10th of the month preceding date of issue and should be limited to 45 words. The form of notice should be such that the initial words indicate the classification. Notices are not repeated in consecutive issues.

nomics. Graduate from high-grade technical school. Permanent position. Two men needed. Application by letter only. Location New York City. Z-2044.

SALES ENGINEER with two or three years' experience, preferably in oxycetylene apparatus. Location New York City. Z-2045.

AIR-COMPRESSOR DESIGNER thoroughly experienced, who can figure cost and production. Give experience, reference and salary expected to start. Location New York City. Z-2048.

GENERAL FOREMAN for boiler shop. Must be man of broad boiler-manufacturing experience. Good executive ability, able to direct efforts of 200 men. Must know boiler details to the last degree. Salary to suit proper man. Location Erie, Pa. Z-2049.

TWO SALESMEN for pneumatic tools. Not absolutely necessary to have actual experience in the line, but must have general knowledge of such business and some sales experience. Location, one man to work out of town and one for New York office. Z-2053.

INDUSTRIAL PHYSICIAN, preferably young man with some experience and a leaning toward that work, with enough initiative to organize and supervise department with two or three assistants. Location New York. Z-2057.

ASSISTANT PLANT MANAGER. Must be graduate mechanical engineer with thorough knowledge of electricity and three to five years' experience. Must also be good executive and able to handle men. Position is with large bottle company in Ohio. Good opportunity for advancement. Man between 30 and 40 preferred. Location Ohio. Z-2058.

SALES ENGINEER to sell derricks for hoisting engineer. Should have construction and sales experience. Location Eastern U. S. Z-2062.

INSTRUCTOR in mechanical engineering required to teach mechanical laboratory and internal-combustion engineering. Engineering graduate with some practical experience desired; teaching experience desirable but not essential. Location Philadelphia. Z-2065.

MECHANICAL ENGINEERING GRADUATE to teach design, gas engine and mechanical laboratory to seniors and supervise laboratory. Location Houston, Texas. Z-2066.

MASTER MECHANIC AND MAINTENANCE ENGINEER for chemical engineering plant. Permanent position. Acetic acid plant. Location New Jersey. Z-2069.

INSTRUCTOR in wood shop, pattern making, carpentry. Teaching experience essential. Intermediate technical training. Three year contract. Location Constantinople, Turkey. Z-2080.

INSTRUCTOR in foundry and forge shop. Teaching experience essential. Intermediate technical training. Three year contract. Location Constantinople, Turkey. Z-2081.

ENGINEER with three or four years' experience in efficient operation of boiler plants. Give complete education and experience, together with age, reference, salary expected, etc. Location Middle West. Z-2092.

DESIGNERS for large machine-tool shop, experienced in design of medium and heavy machine tools used in locomotive and car shops and large machine shops. Give full particulars as to age, training, and experience. Location Mass. Z-2093.

GENERAL SALES MANAGER to take full charge of sales promotion, domestic and export, for a company manufacturing complete line of air compressors, vacuum pumps and centrifugal pumps; require man with initiative and full knowledge of this line of machinery, as well as broad experience in handling selling organization. Unlimited opportunity for right man. Location Penn. Z-2094.

MECHANICAL ENGINEER with wide experience in industrial-plant layout and factory production work, preferably with experience on steam-heating boilers, radiators, etc. Should have good knowledge of conveying equipment. Must also have experience along production lines and be able to supervise setting of piece rates, bonus systems, incentives. Location N. Y. City. Z-2095.

DESIGNER to take charge of designing Diesel engines for installation in cargo vessels; require man experienced in design and development of Diesel engines for marine work and at same time thoroughly competent and practical marine engineer. Location New Jersey. Z-2102.

ASSISTANT PRODUCTION ENGINEER, or shop superintendent, 32, married. Exceptional shop, technical and education experience on large and small work. SM-5552.

SALES ENGINEER, technical graduate, 27, single, 8 years' specialized experience in design of locomotives and railway-rolling stock, desires connection with growing railway equipment or steel company in traveling sales capacity. Good personality, references. Keenly interested in railway field. Will travel anywhere. SM-5553.

MECHANICAL ENGINEER, 36, married, 16 years' experience, draftsman, designer, assistant works engineer, on freight and passenger elevator, also elevating and conveying machinery. At present holds responsible position on plant layout work. Desire to connect permanently in manufacture or construction. Location N. Y. City or N. J. SM-5554.

ENGINEER, as assistant to general manager or president of manufacturing company. Duties to be partly executive and partly devising and putting into effect improvements in design and manufacturing details. Cornell graduate M.E., several years experience, age 30, preferred location Cleveland. Salary \$5000. SM-5555.

ACCOUNT-ENGINEER, experienced in C.P.A. office; M.E. graduate; desires position in accounting or executive work where technical training can be utilized. No actual experience in cost work, though familiar with theory. Married, 30, Protestant, possessing initiative, good personality; highest engineering and accounting references. SM-5556.

SUPERINTENDENT, or industrial engineer, graduate mechanical engineer; 15 years' practical experience along mechanical lines, machine-shop practice, pattern making, design, foundry practice and efficient production and cost methods. Thoroughly familiar with Taylor system of organization and bonus or piece-rate systems. With present employers ten years. Would invest. Location Chicago. SM-5557.

MECHANICAL ENGINEER, 38, married, M.E. graduate, 18 years' experience in steam engineering, reciprocating machinery and unaflow engines, as draftsman, chief, designer, testing, superintending, consulting engineer and inventor. Desires suitable position in research, experimental or development, preferably steam engineering. Good references. Resourceful, energetic and capable to take charge. Philadelphia or East preferred. SM-5558.

MECHANICAL AND STEAM-POWER ENGINEER, 31, married. Technical graduate. Good executive. Ten years' practical experience in shop practice, power plant, operation and construction and steam heating, holding positions of assistant chief engineer and construction superintendent with large corporation. Experienced in handling either white or colored labor, and well versed in safety and welfare work. Minimum salary \$4000. SM-5559.

MECHANICAL ENGINEER, 27, four years' experience in drafting, designing, machine-shop and construction work; 15 months in army, desires position of responsibility. Philadelphia or vicinity preferred, but not essential. SM-5560.

MECHANICAL ENGINEER, 25 years' experience. Expert on design of manufacturing equipment. Good executive and organizer with ability to get results. SM-5561.

GENERAL MANAGER, proven executive and organizer with long experience in handling of men and thoroughly familiar with all branches of manufacturing and general business training in connection with same. Capable of organizing all departments from the taking in of crude materials to marketing of finished product. Twenty years' experience in above lines in manufacture of motor trucks, heavy-duty engines and passenger cars. At present employed by leading manufacturer in Middle West. SM-5562.

MECHANICAL ENGINEER, technically trained, 38, experienced in design and mechanical de-

velopment work including cord-tire specifications, desires connection with rubber company on Pacific Coast. SM-5563.

MECHANICAL ENGINEER, now in charge of drafting room desires position as chief draftsman, assistant engineer or designer. Ten years' experience including drafting on gas engines. Automotive work and mill machinery; inspection and teaching of experimental and mechanical engineering. SM-5564.

SALES ENGINEER, resident Canada, having valuable connection. Practical and theoretical training, desires to connect with firm wishing representative in Canada. SM-5565.

SALES ENGINEER, 35; 10 years' experience in engineering. Also manager Philadelphia territory for Western concern for three years. Desires new connection with good live firm to cover mill and factory trade. SM-5566.

MECHANICAL ENGINEER, technical graduate, employed for past year and a half as equipment and tool engineer, having charge of all planning and purchasing on new \$1,500,000 machinery installation in Middle West. Desires new connection, this work having been completed. Available about September 15 to October 1. Salary about \$3600 a year. SM-5567.

EXECUTIVE ENGINEER, twenty years' broad practical experience in design, construction and operation of mechanical industries; successfully handled engineering work of large, well-known companies; would be pleased to receive communications from firms that want engineer of merit. SM-5568.

INDUSTRIAL OR PLANT ENGINEER; mechanical engineering graduate, 1914, age 31, single; six years' varied manufacturing. Experienced as draftsman, installing production system, foreman, plant engineer, time study and rate setting, industrial-engineering plant layout. Good personality; available immediately. Salary \$3600. SM-5569.

TECHNICAL GRADUATE, 28, practical shop, erecting and sales experience in different parts of country, desires to connect with growing concern in capacity which will lead to executive position. At present employed in charge of a department. SM-5570.

ENGINEER DRAFTSMAN, American, 32, married; twelve years' marine steam engineering, steam turbines, steam-power plants, piping, machine designing. At present chief draftsman, supervising design and installation of engines, boilers, auxiliaries and piping. Available October 1, 1920. SM-5571.

AUTOMOTIVE ENGINEER, high-grade, experienced internal-combustion engine design, graduate M.E. Desires position as chief engineer, assistant chief engineer, research engineer or designing engineer, with automotive company or engine manufacturer. First class references. SM-5572.

MECHANICAL ENGINEER, 35, married; 12 years responsible experience in design, construction and operation of power plants, ice plants and heating systems, also power reports, estimate and valuations. SM-5573.

MANUFACTURING COST-REDUCTION ENGINEER who in past year has created unusual record for saving in cost of production for large automobile parts manufacturer, desires new connection in same or similar line. SM-5574.

MECHANICAL ENGINEER, technical graduate, 35, married; experience in railway-mechanical work, and long experience in heavy-machine and foundry work, desires connection with progressive concern as works manager. SM-5575.

MECHANICAL ENGINEER, 31, technical graduate, 9 years' experience in manufacture, maintenance, and design of steam locomotives, as machinist, inspector, foreman, air-brake supervisor, draftsman, designer and mechanical engineer. Thorough knowledge of locomotives and air-brake equipments. Now employed, but desires more responsible position offering opportunities for advancement, preferably with engineering department of railroad, locomotive builder or railroad supply firm. SM-5576.

TECHNICAL GRADUATE, mechanical, age 27, desires position where push and conscientious work is required. Have had experience in drafting and business in semi-executive capacity. Future greater object than the present salary. SM-5577.

MECHANICAL ENGINEER, executive, designer, expert in design of intricate, labor-saving devices, adding and calculating machinery, etc.,

production methods, etc. Available immediately. SM-5578.

REFRIGERATING ENGINEER, experienced in ice plants and at present owner of northern plant, desires position in capacity of operating and consulting engineer in Southern plant for six winter months. Thoroughly practical man. Also technical training and post-graduate course in refrigeration at leading university. Expect work of winter months to be of more than temporary value. SM-5579.

MECHANICAL ENGINEER AND EXECUTIVE, 33, 15 years' experience covering broad field in operating, repair, design and construction of mechanical lines. Capable organizer or representative; has traveled abroad. Speaks three foreign languages. Willing to go abroad or to the Orient. Minimum salary \$6000 per year. SM-5580.

MECHANICAL ENGINEER, of exceptional executive ability; 22 years, covering design and development of methods, tools, machinery and equipment for economical production. Successful organizer experienced in factory management, maintenance and general construction. At present chief engineer and works manager. Open for engagement in similar capacity or as plant engineer. SM-5581.

WORKS MANAGER OR SUPERINTENDENT, 16 years' training and experience, from machinist to manager. Specialist in modern machine shop, practice, tool and machine design. Successful in organizing, developing and building up existing organization for results. Since release from Engineers, U. S. A., engaged in reorganization of plant. Graduate M. I. T. Age, 37, unmarried. Available promptly, work here being nearly completed. Desires to locate in New England or East. SM-5582.

MECHANICAL ENGINEER, technical graduate, 4 years' shop experience, 13 years' experience in design, detailing, construction and appraisal of industrial and chemical plants, desires position with manufacturing firm as plant engineer or with engineering firm. SM-5583.

PURCHASING ENGINEER, or assistant to executive. Experienced in buying large quantities of material and in manufacturing tractors, automobiles and electrical equipment. Familiar with purchasing problems, follow-up schedules, and stores control. Purchasing work in Middle West preferred. SM-5584.

MECHANICAL ENGINEER, 31; technical graduate, nine years' experience in locomotive manufacture, maintenance and design, as inspector, foreman, airbrake supervisor, draftsman, designer and mechanical engineer. Desires good live position affording opportunity for advancement with engineering department of railroad, locomotive builder, or railway supply firm. SM-5585.

PETROLEUM ENGINEER or refinery superintendent, with 8 years' practical experience; married, 32 years old; graduate mechanical engineer; salary \$5000; location immaterial. Desires position where efficiency counts. Have had practical experience in manufacturing of all petroleum products. SM-5586.

PROFESSOR OF MACHINE DESIGN, and allied subjects available for appointment this fall. Has had successful teaching career in large Eastern University. During past few years and at present in responsible engineering position, but desires to re-enter teaching profession. Best references. SM-5587.

SALES ENGINEER, 30, married; technical graduate, 9 years' practical experience, desirous of changing to selling side of engineering; iron and steel company or house handling engineering specialties preferred. Initial salary immaterial if prospects of future advancement are good. Philadelphia or vicinity preferred. SM-5588.

MECHANICAL ENGINEER, technical graduate, 28 years of age; both drafting and field experience in steam plants and chemical plants, also estimating and purchasing experience, desires connection with industrial concern. Salary \$3600. SM-5589.

MECHANICAL ENGINEER, executive, college graduate, age 34, married. Broad experience in design, construction and operation of engineering project. At present superintendent of large public utility corporation. Possesses pleasing personality; tactful, and keen executive. Desires to associate with progressive business where ability and hard work will be recognized. SM-5590.

DESIGNER ENGINEER, 34; 13 years' experience. Specialized in medium-weight, special

and automatic machinery; knowledge of standardization work for interchangeable manufacture, planning and design of tools and gages; also familiar with sheet-metal stamping work. Capable of managing department. Location New York City or vicinity. SM-5591.

MECHANICAL ENGINEER, Yale graduate, 28; six years' of varied experience in manufacturing. Thoroughly familiar with modern mechanical engineering and production methods. Desires position with progressive manufacturing concern. SM-5592.

EXPORT-ENGINEER, technical training, 17 years' engineering and commercial experience including export sales promotion, having many large foreign connections, wishes to represent in New York, manufacturing of machinery, tools, hardware or engineering lines, for promoting export trade, or domestic business. SM-5593.

MANAGER, SUPERVISING ENGINEER, or superintendent, with 20 years' varied experience, exceptional executive and mechanical ability, judgment and tact, technically trained engineer in addition to being practical mechanic. Can develop progressive methods and processes for quality, quantity and low cost in shops and factories in growing concern or work out new enterprises. SM-5594.

EXECUTIVE, professional engineer and consultant in factory organization and management, desires to give up professional work and become identified with progressive manufacturing organization. Age 31. SM-5595.

ASSISTANT TO PRODUCTION ENGINEER, or manager. Technical graduate. A year in intensive research work in textile industry including time study, two years in Engineers as commissioned officer, one year in personnel work of nationally-known company, well versed in modern practices of industrial management. Age 28; minimum salary \$2800. SM-5596.

ENGINEER EXECUTIVE, with experience and education, including modern business, wishes good permanent connection. A-1 man in shop, in drafting department and as production and process engineer on small and medium interchangeable products made by cutting or stamping brass, steel, etc. SM-5597.

ESTIMATING ENGINEER, young married man; two years' technical training, drafting and shop-layout experience; nearly three years as cost estimator of pressed-steel auto frames and stampings, seeks position as estimator and sales engineer, or technical sales correspondent. Prefer Eastern or Southern States. SM-5598.

MECHANICAL ENGINEER, experienced in teaching M.E. subjects, designing and constructing sugar machinery, textile machinery, plant maintenance, production of small arms and research laboratory, and tractor design, wishes executive engineering position or Professor's chair in mechanical engineering. SM-5599.

YOUNG EXECUTIVE, at present employed as superintendent of machine shop. Five years' experience in shops and as head of production department of large corporation. Salary \$5000. SM-5600.

MECHANICAL ENGINEER, technically educated and trained, over 20 years' experience in consulting, constructing and executive capacities in various branches of engineering work. Recently released, three years in U. S. Air Service with rank of Major; experienced in internal-combustion engines and airplane construction. Desires responsible position with reliable concern, preferably on Pacific Coast, but location immaterial if position satisfactory. SM-5601.

PLANT ENGINEER AND MANUFACTURING EXECUTIVE, highly educated, with good personality and backed by 15 years' successful experience in general engineering and contracting business. At present in entire charge of all construction and maintenance of plants for large manufacturing concern. Accustomed to large responsibilities and thoroughly experienced in economic handling of maintenance problems. In short time open for similar engagement. SM-5602.

MECHANICAL ENGINEER, technical graduate M.E. and B.E., 15 years' experience as maintenance engineer, plant engineer and designer with well known concerns. Expert systematizer and organizer. Now employed. Desires position as maintenance engineer, plant engineer, systematizer, or designing instructor. Location preferred, Michigan or South. SM-5603.

FACTORY SUPERINTENDENT, American, 37; 12 years' experience in manufacture of brass and steel stampings. Thorough knowledge of industrial engineering and its practical application. Close observer of costs. Successfully employed as foreman of slitting machinery; foreman of power-press department; manufacturing superintendent, and production engineer. Salary \$7000. SM-5604.

MECHANICAL ENGINEER, technical graduate, 27. Five years' experience as designer, experimental engineer and executive's assistant, chiefly on light, accurate interchangeable products. Desires position of responsibility with ample opportunity for promotion. SM-5605.

MECHANICAL AND ELECTRICAL ENGINEER, with 15 years' experience in design, erection and operation of mining power plants and mining machinery, both steam and electrically driven. Experienced executive. Can work in harmony with operating department. Familiar with large corporation methods. SM-5606.

CONSULTANT AND CONSTRUCTION MECHANICAL ENGINEER, seeks connection with live wire, established consulting engineering firm. College graduate. Twelve years' experience in general mechanics and special training in all engineering phases pertaining to power-plant design, construction and operation. Well acquainted with European engineering practice and willing to go abroad. Speak three main languages. Salary commensurate to responsibility. SM-5607.

CHIEF OR PLANT ENGINEER. Young American. Served as chief engineer, plant engineer, systematizer and consulting engineer on foundries for large corporations. Thoroughly practical man having started at bottom. Forceful executive and organizer, successfully handling both men and women. Open for engagement about November. Best references. Salary minimum \$6500. SM-5608.

MECHANICAL AND CHEMICAL ENGINEER, graduate of Stevens Institute, with ten years' engineering experience, accustomed to directing and taking full charge of the design, construction and maintenance of complete chemical plants, including power-house, buildings, and all equipment, desires responsible position where his thorough engineering and business training can be used to advantage. Age 31, married. Salary \$6000. SM-5609.

WORKS MANAGER or general superintendent; 21 years' practical experience as a mechanical and executive in manufacture of steam, Diesel and gas engines, interchangeable parts, special machinery, jigs, fixtures, tools, cutters and gages. Excellent record as manager and producer. Age 38, married; want Eastern location. SM-5610.

SALES ENGINEER, 30, M.E. graduate University of Wisconsin; several years of machine shop experience; for past three years successfully selling heavy machinery in New York market; wishes to associate himself with a progressive sales agency in Middle West. SM-5611.

MECHANICAL ENGINEER, 30, Cornell graduate; sales, engineering, production, and executive experience along automotive manufacturing lines, desires connection with live manufacturing or sales organization in vicinity of Chicago. SM-5612.

MECHANICAL ENGINEER, technical graduate, 20 years' broad experience as chief draftsman, estimating engineer, chief engineer, master mechanic and superintendent of plant, in design construction and operation of light, heavy and automatic machinery and of industrial and power plants complete, desires executive position. SM-5613.

MECHANICAL AND ELECTRICAL ENGINEER, two years' civil engineering, four years' mechanical and electrical university course; 14 years' experience comprising design and construction of oil refinery, locks and dams, rifle and machine-gun plant, shipyard, boiler and powder plants, armor-plate and gun-forging plant; including installation of hydraulic, steam, air, and electrical equipment incident thereto. Thoroughly practical with executive ability; not afraid of work. No objection to foreign service provided salary is commensurate with position and location. Minimum U. S. \$5000. At present employed. SM-5614.

MECHANICAL ENGINEER, technical graduate, married; four years' experience testing, operation and maintenance of industrial and public utility steam-turbine power plants of 15,000 to 30,000 k.w. capacity, both coal and oil burning. Prefer Pacific Coast. SM-5615.

MECHANICAL ENGINEER, 36: experienced plant executive; 10 years' active experience field and office, design, erection, operation and maintenance of power and industrial plants, specialist on steam-power and pumping plants, turbo-generators, hydraulic mining and dredging. Discharged after two years war service Captain Engineers and desire connection Pacific Coast or Inter-mountain states. Available October 1. SM-5616.

MECHANICAL ENGINEER or superintendent, desires position with manufacturing plant. Technical education, 32 years old, married. Has 12 years' experience from draftsman to manager. Very broad experience in steam-power plant and industrial engineering. Officer in Navy during late war. Location anywhere east of Mississippi, South Atlantic States preferred. Connection desired with concern that wants man with ability to produce results. Salary \$6000. SM-5617.

MECHANICAL ENGINEER, technical graduate, 36, single; 12 years' experience machinist, master mechanic, material inspector, chief

engineer, and electrician, general contractor, installed and operated steam and hydro-electric power plants; over 3 years with I.C.C. on R.R. valuation, one year office; 2 years in charge of Field work. Prefer Pacific Coast. Minimum salary \$350. SM-5618.

MECHANICAL ENGINEER OR EXECUTIVE, technical graduate; 19 years' practical broad engineering and business experience. Plant layout, construction, specifications and purchase of equipment, tests, maintenance and operation. Fuel efficiencies and economies. Design, construction and installation of labor-saving and material-handling machinery. Competent on manufacturing and shop organization and system. Capable of responsible charges, sales included. Strong credentials. Present salary, \$5000. SM-5619.

ASSISTANT TO EXECUTIVE, chief engineer or sales; Harvard graduate. 10 years' experience hoisting, conveying, power-transmission and coal-handling apparatus. Thoroughly familiar with above lines as designing engineer and practical application. Able cor-

respondent and office manager. Desires responsible connection with reliable and progressive firm. SM-5620.

WORKS ENGINEER with 10 years' experience planning, building and equipping new plants and increasing production in existing plants, also supervision of maintenance of plant and equipment. Excellent executive accustomed to handling successfully large number of men. SM-5621.

MECHANICAL ENGINEER, Columbia graduate, age 28. Five years' experience on construction work, and in all departments of large electric-light and power company. Desires position on industrial work. SM-5622.

EXECUTIVE with five years' experience desires position with progressive concern. Formerly assistant chief engineer with largest ignition manufacturer. Now assistant works manager with concern in similar business. Cornell graduate, M.E. degree. Energetic and capable. Will furnish best of references. Married, age 28. Interview desired. SM-5623.

New Members of the Society

The Publication Committee has decided to give the membership the additional service of printing monthly additions to the list of members. Heretofore such information has appeared but once a year in the Year Book. The list which follows starts with the first members to qualify since the 1920 Year Book went to press and is complete to August 1. The grade is indicated by the symbol after the name: i.e. M = Member; A = Associate; AM = Associate-Member; J = Junior.

ABE, KEIICHI—M, Toyko, Japan
ABRAMS, JOSEPH H.—J, Philadelphia, Pa.
ADAMS, THOMAS D.—J, Afton, N. Y.
ADDDINGTON, HERBERT B.—J, Cleveland, Ohio.
AHLERS, J. A.—J, Cincinnati, Ohio.
AIKEN, J.—AM, New Orleans, La.
AITCHISON, CLYDE S.—J, Berkeley, Cal.
ALBERS, EDWIN W.—J, Schenectady, N. Y.
ALDRICH, JAMES F.—J, Cleveland, O.
ALLEY, VERNON F.—J, Philadelphia, Pa.
ALVEN, ALFONS—J, New York, N. Y.
AMADON, CHARLES S.—J, New London, Conn.
ANSCOTT, WILLIAM—J, Brooklyn, N. Y.
ANDERSON, ERNEST E.—J, Detroit, Mich.
ANDERSON, J. ELMER—J, Springfield, Mass.
ANDREWS, ROGER W.—A, Pittsburgh, Pa.
APPLETON, CLIFFORD T.—J, Bridgeport, Conn.
ARKWRIGHT, REUBEN—AM, New Glasgow, N. S. Canada.

ARMSTRONG, LESTER E.—J, St. Louis, Mo.
ARTHUR, HAROLD M.—A, Shreveport, La.
ASHLEY, GEORGE R.—J, Elizabeth, N. J.
ASPEY, JOSEPH H.—J, Boston, Mass.
ATKINSON, HENRY G.—J, New York, N. Y.
AVERY, LEON J.—J, Lowell, Mass.
AVERY, NATHAN C.—AM, New Britain, Conn.
AYAU, MANUEL S.—J, New York, N. Y.
AYRES, ELWOOD B.—M, Philadelphia, Pa.
AYRES, RUSSELL WM.—J, Stamford, Conn.
BAASE, FRED J.—A, Roxbury, Mass.
BABUSH, JOS. S.—J, Milwaukee, Wis.
BACON, CHESTER A.—M, Auburn, N. Y.
BAILEY, GEORGE N.—M, Worcester, Mass.
BAK, ANDERS K.—J, New Haven, Conn.
BALCH, SAMUEL W.—M, New York, N. Y.
BALL, LESTER W.—J, Portsmouth, N. H.
BANKS, WALTER S.—AM, Bridgeport, Conn.
BARBER, LOUIS—M, Cleveland, O.
BARNARD, MORRIS C.—J, Brooklyn, N. Y.
BARNHART, CLARENCE D.—J, New York, N. Y.
BARRETT, CHAS. D.—M, Altoona, Pa.
BARSKY, GEORGE—J, New York, N. Y.
BASSLER, EDWIN M.—M, Milwaukee, Wis.
BATCHELDER, NELSON A.—M, Providence, R. I.
BATESOLE, DWIGHT E.—AM, Toledo, O.
BEATTIE, JOS. A.—J, Los Angeles, Cal.
BECKER, HARRY N.—AM, Wilmington, Del.
BECKLEY, LEROY W.—AM, Fairfield, aia.
BELL, ALEXANDER H.—AM, El Dorado, Kan.
BELLIS, ALFRED P. S.—M, Trenton, N. J.
BENJAMINS, ISRAEL—J, Brooklyn, N. Y.
BENNETT, WILLIAM H. K.—M, Chicago, Ill.
BENSON, HARRY F.—M, Holyoke, Mass.
BERARD, SAMUEL J.—M, New Haven, Conn.
BERDGE, EDW. A.—AM, Brooklyn, N. Y.
BERGER, ALFRED R.—AM, Brooklyn, N. Y.
BERKELEY, LAWRENCE, J.—AM, Milwaukee, Wis.

BERRY, B. C.—J, Marion, O.
BETZ, ALBERT C.—J, Bradford, Pa.
BICK, HAROLD N.—J, New York, N. Y.
BIXBY, EZRA M.—M, New Haven, Conn.
BLACKBURN, FELIX—AM, Holyoke, Mass.
BLAKE, HAROLD N.—M, Anacanda, Mont.
BLAISDELL, SIDNEY B.—J, Annapolis, Md.
BLATCHFORD, JOHN—AM, Chicago, Ill.
BOATE, GERALD A.—AM, Ottawa, Ont., Canada.
BOILEAU, ARTHUR H.—J, Wellsville, N. Y.
BOND, ALLISON H.—AM, Columbus, O.
BONNELL, CLEMENT M., Jr.—J, New York, N. Y.
BORNSTEIN, JOS.—AM, Boston, Mass.
BOURKE, NORMAN T.—J, Omaha, Neb.
BOWDEN, JOHN H.—AM, Rio de Janeiro, Brazil, S. A.
BOWSER, STANLEY W.—J, New York, N. Y.
BOYLE, JOHN R.—J, Chicago, Ill.
BRADFIELD, EDMUND S.—J, Barnesville, O.
BRANDIS, WM. F., Jr.—J, New York, N. Y.
BRATT, RALPH T.—J, New York, N. Y.
BREED, EVERETT M.—M, San Francisco, Cal.
BRISTOL, EDW. S.—J, Philadelphia, Pa.
BROSTEDT, CARL W.—AM, Springfield, Mass.
BROUGHTON, H. E.—A, Allentown, Pa.
BROUSSEAU, EDW. W.—J, New York, N. Y.
BROWN, JAS. A.—M, New York, N. Y.
BROWN, WARREN G.—AM, Cincinnati, O.
BRUBAKER, WALTER S.—M, Wilmington, Del.
BRUCK, ALBERT G.—AM, Cincinnati, O.
BRUEMMER, CHAS. H.—M, New Britain, Conn.
BRUMBLE, W. C.—J, Muncie, Ind.
BRUNER, R. W.—J, Annapolis, Md.
BRUSSTER, JAS. S.—M, Detroit, Mich.
BRUSSTER, JAS. S.—J, Cleveland, O.
BRYMAN, HARRY—J, New York, N. Y.
BUCK, HENRY R.—M, Hartford, Conn.
BUCK, HERMAN J.—M, Ellwood, Pa.
BUCHANAN, LOUIS—J, Windsor, Ont., Canada.
BUESSER, FRED F.—J, Jersey City, N. J.
BULL, WILLIAM C.—M, New York, N. Y.
BURCH, THOS. H., Jr.—M, New York, N. Y.
BURCHETT, WALTER J.—M, Newark, N. J.
BURHEN, RAYMOND—AM, Washington, D. C.
BURLINGAME, CHAS. R.—J, Moore, Pa.
BURLINGHAM, WM.—M, New York, N. Y.
BURNS, ALAN E.—AM, New York, N. Y.
BURNS, WM. H.—M, Appleton, Wis.
BURTON, SYDEN W.—AM, Providence, R. I.
BUYERS, DONALD E.—M, Rock Falls, Ill.
BYER, HENRY E.—M, Philadelphia, Pa.
BYNUM, EDWIN A., Jr.—J, Cisco, Tex.
CAHLE, HERBERT W.—AM, Detroit, Mich.
CABLITZ, FRED, G.—J, Hoboken, N. J.
CAIN, JOHN N.—AM, Ashabula, Ohio.
CALDER, HORACE W.—A, Baltimore, Md.
CALDWELL, WILLIAM F.—AM, Philadelphia, Pa.
CALL, A. E.—AM, Cincinnati, O.
CALLARD, CHAS. G.—J, Lansing, Mich.
CAMERON, ARCHIBALD P.—M, London, Eng.
CAMPBELL, ARCHIBALD—J, Moore, Pa.
CANAVAN, WILLIAM F.—M, Decatur, Ill.
CANNON, WILFORD Y.—AM, Salt Lake City, Utah.
CARLTON, HENRY T.—M, San Francisco, Cal.
CARROLL, MICHAEL J.—J, Syracuse, N. Y.
CARROLL, JR., PHIL—J, East Pittsburgh, Pa.
CARRUTH, EDWIN W.—AM, Meriden, Conn.
CARY, JOSEPH B.—AM, New York, N. Y.
CASE, PERCIVAL H.—J, Rochester, N. Y.
CASEY, WM. R.—AM, Springfield, Mass.
CASTER, JOHN E.—J, Cincinnati, Ohio.
CASTON, GEORGE W.—AM, Rochester, N. Y.

CERECEDO, JAVIER H.—J, San Juan, P. R.
CHAMBERLAIN, GEORGE E.—AM, Baltimore, Md.
CHAMBERS, GEORGE G.—J, New York, N. Y.
CHAPIN, JOHN J.—M, New York, N. Y.
CHAPLIN, JOHN II.—J, Bristol, Conn.
CHAPMAN, CYRIL T.—J, Scranton, Pa.
CHASAN, LOUIS H.—J, New York, N. Y.
CHEN, YUNG HAN—J, Hoboken, N. J.
CHESNEY, MALCOLM M.—J, Pittsfield, Mass.
CLARK, MCKINLEY F.—J, Beatrice, Neb.
CLARK, THOMAS S.—N, Brooklyn, N. Y.
CLARK, WALTER J.—J, Brooklyn, N. Y.
CLARK, WATSON G.—M, New York, N. Y.
CLARKE, CLARENCE P.—M, Pittsburgh, Pa.
CLARKE, CAPT. I. BROOKS—M, Meriden, Conn.
CLARKE, WM. W.—J, Bridgeport, Conn.
CLEARY, JAMES F.—AM, Newburgh, N. Y.
CLEMENS, ALONZO W.—M, Bethlehem, Pa.
CLINCH, CHAS. H.—M, Carthage, N. Y.
COBB, ARTHUR—M, Lakehurst, N. J.
COCHRAN, ETHELBERT J.—M, Hamilton, Ohio.
COCHRANE, WM. F.—M, So. Baltimore, Md.
COLE, BENJAMIN E.—AM, Bethlehem, Pa.
COLE, RALPH A.—J, Jackson, Mich.
COLEMAN, JR., THOMAS C.—J, Chicopee Falls, Mass.
COMBE, FRANK A.—M, Montreal, Quebec, Canada.
COMFORT, GEORGE B.—M, Frankford, Pa.
CONNOR, ALEXANDER P.—AM, Springfield, Mass.
COOHAN, FRANK G.—J, Chicago, Ill.
COOK, HARMON T.—J, Torrington, Conn.
COOK, JAMES C.—M, Atlanta, Ga.
COOK, JOHN W.—M, New York, N. Y.
COOKE, A. F.—M, Pittsburgh, Pa.
COOPER, JAMES E.—AM, Bridgeport, Conn.
COTHRAN, JAMES S.—M, Charlotte, N. C.
COVERT, HOMER L.—J, Louisville, Ky.
COX, THOMAS R.—AM, New York, N. Y.
CRANE, HENRY M.—M, New York, N. Y.
CRAUN, J. M.—J, St. Louis, Mo.
CROFT, HUBER O.—J, Denver, Col.
CROSER, PAUL E.—AM, Indianapolis, Ind.
CROSS, HAROLD W.—M, Chicago, Ill.
CROUCH, RAY C.—AM, Leedsdale, Pa.
CROWLEY, CHARLES P.—J, Philadelphia, Pa.
CRUSER, F. VAN DYKE—M, New York, N. Y.
CULLEN, CHARLES R.—J, Lima, Peru.
CUMMINGS, STANLEY R.—J, Woolaston, Mass.
CUTTER, EDMUND I.—AM, Norwood, Ohio.
DA COSTA, 3RD., JOHN C.—Philadelphia, Pa.
DALTON, HOWARD H.—M, New York, N. Y.
DANIELS, DWIGHT C.—AM, Worcester, Mass.
DANIELS, JOHN H.—M, Providence, R. I.
DAVIDSON, JOHN L.—J, Gary, Ind.
DAVIS, E. W.—M, New York, N. Y.
DAVIS, HARVEY N.—M, Cambridge, Mass.
DAVIS, OSCAR A.—M, Alliance, Ohio.
DAY, RALPH R.—M, Port Jefferson, L. I., N. Y.
DEAN, ARCHER G.—M, Philadelphia, Pa.
DEAN, STUART—M, Indianapolis, Ind.
DEARBORN, RICHARD J.—M, New York, N. Y.
DE BARR, EDWIN—M, Norman, Okla.
DEBOOS, FRANK A.—AM, Chicago, Ill.
DEBUTTS, DEAN J.—J, Tulsa, Okla.
DEEDS, DEAN DALTON—M, Lorain, O.
DEGENER, GUSTAVE O.—AM, New York, N. Y.
DELORENZO, OTTO—J, New York, N. Y.
DEMAREST, STIRLING J.—J, New York, N. Y.
DEMPSTER, CLYDE B.—J, Beatrice, Neb.
DENNEN, WALTER B.—J, Worcester, Mass.
DE ROSAY, KINGSLEY E.—J, No. Phila., Pa.
DEVIGNIER, ROBERT M.—M, New Jersey.

- DEVINE, JAMES J.—J, Troy, N. Y.
 DE VRIES, DANIEL—J, Passaic, N. J.
 DEWEY, HARRY E.—AM, Toronto, Ont., Canada.
 DEWEY, MAURICE J.—J, Houston, Texas.
 DEXTER, A. MORTON—M, Philadelphia, Pa.
 DICKIE, ALEXANDER J.—A, San Francisco, Cal.
 DILLON, EDWARD H.—A, Philadelphia, Pa.
 DINGMAN, CHARLES F.—M, Palmer, Mass.
 DIXON, WILLIAM E.—M, Cambridge, Mass.
 DODGE, ARTHUR C.—A, Cincinnati, Ohio.
 DODSON, ROWLAND W.—J, E. St. Louis, Ill.
 DOEN, LORAN F.—AM, Flint, Mich.
 DONOVAN, WILLIAM T.—J, New York, N. Y.
 DOWELL, DAWSON—J, Philadelphia, Pa.
 DOWNS, SYDNEY F.—J, Landsford, Pa.
 DRAKE, JOHN L.—J, Defiance, O.
 DROMGOOL, PETER J.—AM, New Orleans, La.
 DRYSDALE, WALTER D.—M, Detroit, Mich.
 DUFF, PHILIP J.—M, Philadelphia, Pa.
 DULLIGAN, CHARLES E.—AM, Lowell, Mass.
 DUNCAN, JAMES R.—AM, New York, N. Y.
 DUNCAN, LEONARD R.—J, Brooklyn, N. Y.
 DUNN, ALBERT L.—J, East Norwalk, Conn.
 DUGAN, SAMUEL A.—AM, New York, N. Y.
 EBY, SAMUEL E.—AM, Ridley Park, Pa.
 EICHORN, HARRY L.—AM, Oak Park, Ill.
 EISERT, HERMANN—M, Baltimore, Md.
 ELLERS, KARL F.—M, Verona, Pa.
 ELEY, J. N.—J, Atlanta, Ga.
 ELLIS, GEORGE J.—J, Philadelphia, Pa.
 ELLIS, GERSHOM P.—J, Boston, Mass.
 ELLIS, J. CORSON—AM, Canastota, N. Y.
 ELLIS, LEON D.—J, Boston, Mass.
 ELLIS, ROY M.—A, Philadelphia, Pa.
 ELLISON, MICHAEL H.—AM, Hamilton, O.
 ELSNER, WILLIAM H.—AM, St. Paul, Minn.
 EMERSON, MILTON—AM, Cincinnati, O.
 EMMONS, LOUIS J.—J, Portland, Md.
 ENGLEKING, WALTER W.—J, Duluth, Minn.
 ENSIGN, WILLIAM B.—M, New York, N. Y.
 ESTES, FREDERICK A.—M, Boston, Mass.
 EUSTIS, IRVING N.—J, Fairmont, Minn.
 EVANS, GILBERT H.—J, Brooklyn, N. Y.
 EVANS, GORDON M.—J, Keeseville, N. Y.
 EVERHART, HAROLD S.—AM, Columbus, Ohio.
 EWING, GEORGE H.—M, Seattle, Wash.
 FAIRMAN, SEIBERT—J, Lynn, Mass.
 FAY, FRED B.—AM, Worcester, Mass.
 FEENEY, FRANK A.—J, New York, N. Y.
 FERUGSON, D. M.—AM, New York, N. Y.
 FIEBIGER, HENRY J.—J, Waterbury, Conn.
 FIELD, MALCOLM F.—J, Springfield, Mass.
 FINE, LEWIS—AM, Philadelphia, Pa.
 FINEGAN, LEO—M, Baltimore, Md.
 FISCHER, BOYD—A, Philadelphia, Pa.
 FISKE, WARREN M.—J, Milwaukee, Wis.
 FLANDERS, CHAS. E.—J, Waverly 79, Mass.
 FLEISHER, SIMON—M, Lynn, Mass.
 FLEMING, LAWRENCE T.—AM, Chicago, Ill.
 FLORCYKE, EDW. M.—J, Bethlehem, Pa.
 FLYNN, JOHN A.—A, Detroit, Mich.
 FOCARDI, PIER L.—M, Brooklyn, N. Y.
 FORD, ARTHUR R.—J, Jersey City, N. J.
 FORD, LOUIS R.—M, New York, N. Y.
 FRANCIS, CHAS. W.—M, Paterson, N. J.
 FRANCIS, THAYER—J, Brookline, Mass.
 FRANCK, HERMAN, JR.—M, Paterson, N. J.
 FRANKCE, WM. J.—M, New Brunswick, N. J.
 FRARY, HOBART D.—AM, Madison, Wis.
 FREEDLEY, PAUL—M, Philadelphia, Pa.
 FREIDAY, JAY A.—M, New York, N. Y.
 FRENCH, STUART K.—M, Hog Island, Pa.
 FRICK, CLIFFORD H.—AM, Tamaqua, Pa.
 FUGON, EARL H.—J, Seward, N. J.
 FRITSCH, ROBERT E.—J, Philadelphia, Pa.
 FROELICH, HOLMES L.—J, Flint, Mich.
 FURLOW, JAS. W.—M, Washington, D. C.
 FYKSE, MITCHELL L.—M, Milwaukee, Wis.
 GANG, OLIVER F.—J, Boston, Mass.
 GANNON, JESSE—AM, Chicago, Ill.
 GARMAN, WARREN DEW.—AM, Detroit, Mich.
 GAY, LINDSEY E.—AM, Detroit, Mich.
 GAY, WALTER C.—J, New York, N. Y.
 GAZDA, A. A.—J, Chicago, Ill.
 GENEST, HOMER A.—M, Hartford, Conn.
 GERELITZKI, HARRY E.—J, Lancaster, Pa.
 GERSEN, FREDERICK C.—J, Philadelphia, Pa.
 GESELL, EGBERT G.—AM, New York, N. Y.
 GETCHELL, EDW. L.—AM, Durham, N. H.
 GILBERT, CHAS. N.—J, Philadelphia, Pa.
 GILLIARD, CHAS. T.—J, Boston, Mass.
 GILLIARD, P. G.—J, Williamsport, Pa.
 GILMORE, FORREST E.—J, Tulsa, Okla.
 GINTER, GEO. E.—M, Bayonne, N. J.
 GLAUCH, EDMUND S.—J, Harrisburg, Pa.
 GLEW, JAS. S.—M, Toledo, O.
 GODHOLD, LOUIS A.—M, Houston, Tex.
 GOLDRICK, ALBERT R.—AM, Cleveland, O.
 GOOD, CHAS. W.—J, Ann Arbor, Mich.
 GOODMAN, LESTER L.—J, Brooklyn, N. Y.
 GORDON, MYRON B.—J, New York, N. Y.
 GOUGH, WM. E.—AM, Shelton, Conn.
 GOWLING, LAWRENCE E.—AM, Havana, Cuba.
 GOYNE, WM. J.—AM, New York, N. Y.
 GRAMMER, REYNOLD A.—J, Boston, Mass.
 GRANGER, GORDON T.—AM, Burkburnett, Tex.
 GREENLEE, WM. B.—A, Chicago, Ill.
 GREENWOOD, JOS. R.—M, New York, N. Y.
 GREGORY, GUY—A, New York, N. Y.
 GREGORY, WM. K.—AM, Louisville, Ky.
 GRIDLEY, ALLEN H.—AM, New York, N. Y.
 GRIFFIN, W. A.—M, Buffalo, N. Y.
 GRUBE, LESTER E.—AM, Lynn, Mass.
 GUETH, OSWALD—M, Washington, D. C.
 GUIDER, JOHN F.—M, Buffalo, N. Y.
 GULLAK, JOHN H.—M, Harriman, Pa.
 GUMAER, PIERRE L.—J, Bayonne, N. J.
 GUY, ROBERT P.—AM, Hartford, Conn.
 HAGHERG, ERIC E.—M, Neuss, Germany.
 HAHN, CLIFFORD A.—AM, Columbus, O.
 HALER, PERCY J.—M, Leyton, Essex, England.
 HALL, ALEXANDER D.—J, Detroit, Mich.
 HALL, IRVING G.—J, Waynesboro, Pa.
 HALLER, HENRY E.—M, Pittsburgh, Pa.
 HALPIN, BERNARD S.—A, Bridgeport, Conn.
 HAMILTON, GEORGE G.—M, Harrison, N. J.
 HAINES, ELMER B.—J, Hartford, Conn.
 HANKINS, FRANK W.—J, Auburn, N. Y.
 HARDING, GEO. W.—AM, Indian Head, Md.
 HARKINS, HENRY DRAKE—J, Warren, O.
 HARMON, HOYT H.—AM, Naugatuck, Conn.
 HARPER, ARTHUR C.—M, Urbana, Ill.
 HARRISON, JAMES H.—J, Buffalo, N. Y.
 HARRISON, THOMAS L.—AM, Wilmington, Del.
 HART, EDWIN J.—AM, Philadelphia, Pa.
 HART, NELSON W.—A, Holyoke, Mass.
 HART, THOMAS G.—J, Chicago, Ill.
 HARTMAN, GEO. H.—AM, Toledo, Ohio.
 HARTWIGT, HORACE J.—J, Tulsa, Okla.
 HARTWICK, LOUIS M.—M, Low Moor, Va.
 HARVICE, KING A.—M, New York, N. Y.
 HASHAGEN, JOHN B.—J, El Paso, Texas.
 HASKINS, MANLY K.—AM, Lorain, O.
 HAYNES, ELWOOD—M, Kokomo, Ind.
 HAYWARD, HENRY W.—J, Charlotte, N. C.
 HEADSON, FRANK A.—M, Milwaukee, Wis.
 HECKMAN, JAMES C.—M, Boston, Mass.
 HEENAN, JOHN NELSON D.—J, London, Eng.
 HELMICK, WALTER E.—J, San Francisco, Calif.
 HELT, HARRY C.—AM, Chicago, Ill.
 HENDERSON, ALFRED E.—J, Albany, N. Y.
 HENRY, ADDISON B.—J, New Haven, Conn.
 HENRY, JOHN M.—AM, Hartford, Conn.
 HENRY, OTTO H.—J, Brooklyn, N. Y.
 HENSEL, SIEGFRIED R.—J, Jersey City, N. J.
 HENTHORN, ARTHUR L.—AM, Sherbrooke, Quebec, Canada.
 HERNDON, PARRISH T.—J, City Point, Va.
 HERZOG, RALPH W.—AM, New Haven, Conn.
 HEWES, OLIVER P.—AM, Arlington, N. J.
 HIBBARD, MERRILL—M, Columbus, O.
 HILDEBRAND, H. EDWARD—J, Newburgh, N. Y.
 HILDRED, JOHN W.—A, St. Paul, Minn.
 HILDRETH, NED E.—M, Kansas City, Mo.
 HILLER, PAUL W.—J, Carbondale, Pa.
 HILTON, HAROLD R.—M, Los Angeles, Calif.
 HOBBS, ELMER E.—AM, Philadelphia, Pa.
 HODGDON, DONALD F.—J, Baltimore, Md.
 HOELZEL, OTTO—AM, New Haven, Conn.
 HOFFMAN, ROBERT J.—M, New York, N. Y.
 HOLLY, WORRELL H.—J, Atlanta, Ga.
 HOLZ, ROBERT—J, Cincinnati, O.
 HOOK, IRA T.—M, Detroit, Mich.
 HOOPE, PENROSE R.—AM, Philadelphia, Pa.
 HOOVER, H. EARL—AM, Chicago, Ill.
 HOPKINS, FRANK H.—M, Boston, Mass.
 HORNBERG, RALPH D.—AM, Detroit, Mich.
 HOSMER, ASA—AM, Charlotte, N. C.
 HOUGHTON, CARL R.—Connorsville, Ind.
 HOVEY, WILLIAM F.—M, New York, N. Y.
 HOWELL, EDWARD N.—J, Portsmouth, Va.
 HOWELL, WILLIAM G.—J, Philadelphia, Pa.
 HOWLETT, CHARLES A. S.—M, Utica, N. Y.
 HUBBARD, GEORGE M.—M, Oakland, Calif.
 HUBBELL, HENRY W.—J, Philadelphia, Pa.
 HUHLE, DAVID V.—J, West La Fayette, Ind.
 HUBLEY, GEO. W.—M, Louisville, Ky.
 HUDSON, RAY N.—AM, Terre Haute, Ind.
 HUGHES, CHARLES W.—J, Yonkers, N. Y.
 HUNTSCKER, CHARLES R.—M, Akron, O.
 HUNTER, FRANCIS W.—J, Trenton, N. J.
 HUNTSHERGER, RUSSELL C.—AM, Middleton, O.
 HUTCHINSON, ARTHUR E.—A, St. Louis, Mo.
 HVOSLEF, FREDERICK W.—J, Detroit, Mich.
 IMMEDIATO, GERARDO—M, Brooklyn, N. Y.
 INFIORATI, JR., MATTEO E.—AM, New London, Conn.
 INGERSOLL, CHARLES B.—M, Cleveland, Ohio.
 INGLE, HENRY W.—AM, Hartford, Conn.
 INMAN, EDWARD R.—M, Franklin, Pa.
 JACKA, EDWIN B.—M, Baltimore, Md.
 JACKSON, CHAS. H.—AM, Milwaukee, Wis.
 JACOB, EDW. W.—M, Brooklyn, N. Y.
 JAKUB, RUSSELL—J, New York, N. Y.
 JAROH, WILHELM—AM, Los Angeles, Cal.
 JENSEN, SCOT—J, West Homestead, Pa.
 JIMMERSON, FRANCIS A.—AM, Athens, Pa.
 JOHNSON, ALFRED V.—AM, New York, N. Y.
 JOHNSON, B. F. S.—M, Worcester, Mass.
 JOHNSON, FRED V.—M, Philadelphia, Pa.
 JOHNSON, JOHN T.—AM, Barberton, Ohio.
 JOHNSON, M. J.—M, East Auburn, Cal.
 JONES, MALVERN S.—AM, Detroit, Mich.
 JONES, FORREST E.—AM, El Dorado, Kan.
 JONES, HOBART B.—J, New Britain, Conn.
 JONES, PAUL T.—M, Corinth, Miss.
 JONES, SPENCER A.—AM, New York, N. Y.
 JORDAHL, ARNE—AM, Chicago, Ill.
 JORDAN, JOHN P.—M, New York, N. Y.
 JORGENSEN, OLAV E.—M, New York, N. Y.
 JOSELOWITZ, HARRY A.—AM, Minneapolis, Minn.
 JOYCE, CHAS. V.—J, Hyattsville, Md.
 KAYSER, WENDELL H.—J, Endicott, N. Y.
 KEAT, WILLIAM G.—J, Washington, D. C.
 KIEFER, CARL J.—M, Cincinnati, Ohio.
 KEMP, CHESTER S.—AM, Syracuse, N. Y.
 KENDALL, HOWARD C.—M, New York, N. Y.
 KENNEDY, FRED T., JR.—J, Erie, Pa.
 KERR, DAVID J.—AM, Canton, Haywood County, N. C.
 KETCHER, RANDOLPH E.—J, New York, N. Y.
 KILEY, LEROY D.—AM, Chicago, Ill.
 KIMMEL, GEO. C.—M, Cincinnati, Ohio.
 KIMMEY, HAROLD I.—J, Syracuse, N. Y.
 KINCAID, RUSSELL MCW.—M, Garden City, L. I., N. Y.
 KING, CHAS. E.—M, Indianapolis, Ind.
 KING, DOUGLAS H.—J, Newark, N. J.
 KING, ELDERED LAWRENCE—J, Toledo, Ohio.
 KIPPER, FREDERICK C.—AM, East Orange, N. J.
 KLOTZ, ALBERT W.—J, Williamsport, Pa.
 KLOTZ, EDGAR L.—J, Fullerton, Pa.
 KNOWLES, HARVEY C.—AM, New York, N. Y.
 KOCHNER, WM. B.—J, Madison, Ill.
 KOEHLER, PERCY B.—AM, St. Louis, Mo.
 KOENITZ, ARTHUR C.—AM, Brooklyn, N. Y.
 KOPPLEMAN, MORRIS D.—J, Long Island City, N. Y.
 KRAFT, CARL—J, New York, N. Y.
 KRAMER, ANDREW A.—M, Kansas City, Mo.
 KRANE, LEONARD J.—J, Chicago, Ill.
 KRATZ, RAYMOND C.—AM, Philadelphia, Pa.
 KRAUSE, EDWIN E.—M, Springfield, Mass.
 KUEHNER, ARTHUR T.—AM, Baltimore, Md.
 KUHLL, ROBERT J.—J, St. Louis, Mo.
 LA CASSE, ALBERT H.—M, Richmond, Cal.
 LAIRD, ELMER R.—AM, Chicago, Ill.
 LANGFITT, JOS. K.—M, Indianapolis, Ind.
 LARKIN, WM. H., JR.—A, Butler, Pa.
 LARSON, LLOYD E.—AM, New York, N. Y.
 LASSMAN, BENJ.—AM, Cleveland, Ohio.
 LAWRENCE, CHAS. M.—AM, New York, N. Y.
 LE BLOND, HAROLD R.—J, Cincinnati, Ohio.
 LEE, MAYNARD DE W.—AM, Rochester, N. Y.
 LEH, HOWARD H.—AM, Nazareth, Pa.
 LESLIE, HERBERT—J, Elizabeth, N. J.
 LESSIG, HILARY M.—M, Pottstown, Pa.
 LEVENTHAL, LEWIS F.—J, Hartford, Conn.
 LEWIS, CHAS. McL.—J, Milwaukee, Wis.
 LIEBOWITZ, BENJ.—AM, New York, N. Y.
 LIEBOWITZ, BENJ.—AM, New York, N. Y.
 LINDNER, KARL A.—AM, New York, N. Y.
 LINDSAY, ALEXANDER—M, Spokane, Wash.
 LINDSTROM, ARTHUR W.—AM, Cudahy, Wis.
 LLOYD, LINNEL P.—J, Philadelphia, Pa.
 LOEW, CHAS. F.—A, Cleveland, Ohio.
 LOVETTE, STANISLAUS A.—AM, Roanoke, Va.
 LUDERS, RICHARD E.—J, Pt. Arthur, Tex.
 LUKENS, WM. H.—AM, Bethlehem, Pa.
 LUND, NELS B.—J, Brooklyn, N. Y.
 LUNDELL, GEO. A.—M, New York, N. Y.
 LUNDQUIST, ARVID—AM, Brooklyn, N. Y.
 LUNOY, W. N. L.—J, Cincinnati, Ohio.
 LYON, JAS. F.—A, Providence, R. I.
 LYNN, WM. H.—AM, Lorain, Ohio.
 MCBRIDE, WM. J.—M, Lynn, Mass.
 MCCAHE, FRANK E.—M, Cleveland, Ohio.
 MCCALL, ROGER F.—J, Annapolis, Md.
 MCCARTHY, JOHN P.—J, West New York, N. J.
 MCCULLOUGH, WM. T., JR.—J, Cincinnati, Ohio.
 McDONALD, DONALD—M, New York, N. Y.
 McDUGALL, ERIC W.—AM, Brooklyn, N. Y.
 MCEWEN, JOHN D.—J, Warren, Ohio.
 MCGIR, THEO. G.—M, Springfield, Mass.
 MCKEE, WILLIS—M, Cleveland, Ohio.
 MCKINLEY, WM. A.—J, Detroit, Mich.
 MCLAUGHLIN, CARL D.—J, Wollaston, Mass.
 MCLEAN, EMBURY—M, New York, N. Y.
 MCMAHONY, FRANK—M, Washington, D. C.
 MCNAIR, CHARLES—A, Franklin, Pa.
 McNALLY, KEENAN J.—J, New York, N. Y.

- MCNEELY, HARRY B.—J, Indianapolis, Ind.
 MCQUEENEY, JAS. T.—J, New Haven, Conn.
 MCVEITY, PERCY, G.—J, Pittsburgh, Pa.
 MACWATY, FRANK L.—J, Hasbrouck Heights, N. J.
 MALAHAN, JAS. T.—AM, Thomaston, Conn.
 MANTONYA, WM. G.—J, Chicago, Ill.
 MARCALUS, NICHOLAS.—J, Plainfield, N. J.
 MARCELLUS, ROY C.—M, Victoria, Australia.
 MARGUARDT, WM. C.—J, Troy, N. Y.
 MARSHALL, LAWRENCE P.—J, Worcester, Mass.
 MARTIN, CHAS. H.—M, Springfield, Mass.
 MARTIN, EVAN S.—M, Toronto, Ont., Canada.
 MATSON, CLIFFORD H.—AM, Ft. Wayne, Ind.
 MATTHEWS, REGINALD G.—J, Orange, N. J.
 MATTINGLY, GEO. B.—AM, Edge Moor, Del.
 MAURER, CLAUDE N.—AM, Woodstock, Ill.
 MAY, ELLIOT D.—J, Winchendon, Mass.
 MAYO, PERCY B.—AM, Charlotte, N. C.
 MELICK, NEAL A.—M, Newark, N. J.
 MERCER, LEONARD B.—AM, Tiffin, Ohio.
 MERKER, DAVID.—J, New York, N. Y.
 MERO, JOSEPH M.—J, New York, N. Y.
 MERRILL, M. H.—M, Boston, Mass.
 MERRIMAN, MERLE E.—AM, Chicago, Ill.
 MEYER, PETER.—AM, Newark, N. J.
 MILLER, CHARLES F.—M, Providence, R. I.
 MILLER, HARRY G.—AM, Milwaukee, Wis.
 MILLER, ROBERT N.—M, San Francisco, Cal.
 MILLS, FRANK H.—AM, Frankford, Phila. Pa.
 MINER, NELSON A.—AM, Riverton, Ill.
 MONAHAN, THOMAS G.—AM, Pittsburgh, Pa.
 MONTANES, CHARLES E.—M, Barcelona, Spain.
 MONTERES, WALTER R.—M, New York, N. Y.
 MONTGOMERY, GEORGE A.—J, Yonkers, N. Y.
 MOODY, HOWARD.—AM, New Orleans, La.
 MORELAND, ALBERT S.—J, Thompsonville, Conn.
 MORRIS, DWIGHT B.—J, Gibbstown, N. J.
 MORRIS, THOMAS E.—AM, Springfield, Mass.
 MORRIS, WILLIAM C.—AM, Easton, Pa.
 MORRIS, WM. O.—J, Hartford, Conn.
 MORRISSEY, ARTHUR D.—AM, New York, N. Y.
 MORRISSEY, RAY L.—J, Cincinnati, Ohio.
 MORT, WM.—M, New York, N. Y.
 MORTIMER, JAMES D.—M, New York, N. Y.
 MUELLER, MAX W.—M, York, Pa.
 MUNROE, ED. K.—M, Baltimore, Md.
 MURRAY-SCOTT, JOHN.—M, Sydney, N. S. W., Australia.
 NASH, CARLETON B.—J, Scranton, Pa.
 NAYLOR, GEORGE M.—M, New York, N. Y.
 NEEDHAM, ROBERT J.—M, Verdun, Quebec, Canada.
 NELSON, MINTON S.—J, Saginaw, Mich.
 NELSON, SWEN W.—J, Cleveland, Ohio.
 NETTLETON, GEORGE H.—J, New York, N. Y.
 NEUBER, GEORGE H.—J, Philadelphia, Pa.
 NEUBOLD, RICHARD S.—M, Philadelphia, Pa.
 NEWBURY, ROBERT C.—AM, Denver, Col.
 NEWCOMB, RAYMOND.—J, New York, N. Y.
 NEWELL, HARRY B.—M, Pittsburgh, Pa.
 NEWILL, GEORGE E.—M, Amherst, Nova Scotia, Canada.
 NEWMAN, J. P.—M, New Britain, Conn.
 NICHOL, ALFRED H.—J, Detroit, Mich.
 NORDEN, HENRY F.—J, Newport News, Va.
 NORTON, EDGAR W.—M, Worcester, Mass.
 NORTON, HOWARD C.—J, Elizabeth, N. J.
 NORTON, WILLIAM T., JR.—M, Camp Holabird, Md.
 NUGUE, PIERRE.—M, New York, N. Y.
 OBLER, DAVID M.—AM, Hastings-on-Hudson, N. Y.
 O'CONNOR, JOHN F.—M, Chicago, Ill.
 O'HARA, GEORGE D.—M, San Francisco, Cal.
 OLSEN, GUSTAV E.—J, New York, N. Y.
 OPINSKY, JOHN E.—J, Pittsburgh, Pa.
 ORPIN, FRANCIS W.—AM, Montevideo, Uruguay, S. A.
 PAGE, ARVIN.—J, Palmerton, Pa.
 PAINE, ARTHUR P.—AM, New Haven, Conn.
 PAISLEY, JOHN K.—J, West Lynn, Mass.
 PANFIL, ANTHONY C.—J, Detroit, Mich.
 PANGBORN, ROBERT G.—J, Philadelphia, Pa.
 PARKER, FREDERIC T.—M, Richmond, Surrey, England.
 PARSONS, MUNROE H.—J, Bayonne, N. J.
 PATERSON, ALBERT B.—M, New Orleans, La.
 PEASE, GILES S.—M, Worcester, Mass.
 PECK, EDWARD L.—AM, Bartlesville, Okla.
 PENDER, WINFIELD R.—AM, Houston, Texas.
 PENMAN, WALTER R.—J, Lebanon, Pa.
 PERRY, CLARENCE C.—M, Hartford, Conn.
 PERRY, HARRY M.—AM, Los Angeles, Cal.
 PETERS, JOSEPH W.—AM, St. Louis, Mo.
 PETERSON, JOHN B.—J, Washington, D. C.
 PETITJEAN, CHARLES P.—M, Paris, France.
 PETTY, EARL.—J, New York, N. Y.
 PFAHLER, FREDERICK P.—M, Washington, D. C.
 PHILLIPS, JOHN C.—AM, New York, N. Y.
 PIKE, LORENZO H.—M, Brooklyn, N. Y.
 PLAPP, ELMER B.—J, Pittsburgh, Pa.
 PLATE, HARRY V.—AM, Byng, Oklahoma.
 PLATE, HENRY D.—AM, Decatur, Ill.
 PLATT, FRANK L.—AM, New York, N. Y.
 POMEROY, G. M.—J, Worcester, Mass.
 PORKER, HARRY.—J, New Britain, Conn.
 PORTER, ROBERT B.—J, Bridgeport, Conn.
 POSPISIL, LOUIS J.—M, Spokane, Wash.
 POTTER, CARL H.—AM, Passaic, N. J.
 POTTER, ERROD M.—AM, New York, N. Y.
 POTTER, ROBERT E.—M, Kittery, Me.
 POTTS, WILLIAM K.—J, Sacramento, Cal.
 POUKEN, EUGENE.—AM, Menominee, Mich.
 PRADO, JOSE DE J.—M, New York, N. Y.
 PRATT, EVERARD S.—A, Newark, N. Y.
 PRICE, JOHN C.—M, Springfield, Vt.
 PRICE, STEPHEN W.—AM, Philadelphia, Pa.
 PRINCE, WARREN F.—J, Lowell, Mass.
 QUATTLEBAUM, HAROLD H.—J, Newman, Ga.
 QUEISSER, CHARLES F.—AM, Cleveland, Ohio.
 QUESNEL, NICHOLAS W.—A, Toronto, Canada.
 RABEZZANA, HECTOR.—M, Flint, Mich.
 RACK, EDGAR C.—J, Newark, N. J.
 RAE, FRANK B.—M, Cleveland, Ohio.
 RAMSEY, CLIFFORD H.—M, Paterson, N. J.
 RAPP, AXEL G. J.—M, Chicago, Ill.
 RAWLINGS, FREDERICK G.—AM, Providence, R. I.
 RAYMOND, RAYMOND P.—AM, Bridgeport, Conn.
 REID, NEIL K.—J, Alliance, Ohio.
 REIMER, FRANK H.—J, Wilmington, Del.
 REINERT, GEORGE L.—AM, Fairfield, Ala.
 RETTERER, RAY W.—J, Beechgrove, Ind.
 REYES, HERMENGILDO B.—J, Manila, P. I.
 RICE, CHESTER L.—A, New York, N. Y.
 RICE, F. EDGAR.—M, Bartlesville, Okla.
 RICH, CLARENCE D.—AM, Toledo, Ohio.
 RICHARDSON, HENRY A.—AM, Brooklyn, N. Y.
 RINEHART, ALFRED W., JR.—AM, Pittsburgh, Pa.
 RITCHINGS, HAROLD E.—J, Newark, N. J.
 ROBBINS, WILLIAM F.—AM, Faneuil, Mass.
 ROBERT, JOHN.—AM, Chicago, Ill.
 ROBERTS, DEERING S.—AM, Boston, Mass.
 ROBERTS, JAMES FRANK.—J, Milwaukee, Wis.
 ROBERTSON, JOHN D.—J, New Haven, Conn.
 ROCKENFIELD, WM. ALBERT.—AM, Worcester, Mass.
 ROBINSON, MERRILL P.—AM, New York, N. Y.
 ROBINSON, SAMUEL M.—M, San Francisco, Cal.
 ROCKWELL, JOHN H.—J, New York, N. Y.
 ROGERS, HOWARD H.—AM, Moline, Ill.
 ROSE, HAROLD MCN.—AM, Huntington, Pa.
 ROSENBERG, SIDNEY.—M, New York, N. Y.
 ROSS, JOHN O.—M, Hyde Park, Mass.
 ROWE, LOUIS G.—AM, Gloucester, Mass.
 ROSOE, OLAV C.—AM, Seattle, Wash.
 RUGG, HARRY M.—M, Melrose, Mass.
 RUSSEN, ETHELBERG A.—M, Providence, R. I.
 RUSSELL, WILLIAM J.—AM, Irvington, N. J.
 RYAN, JAMES H.—AM, Springfield, Mass.
 SAGO, HAMILTON R.—J, Atlanta, Ga.
 SALISBURY, FRANK W.—M, Parkersburg, West Va.
 SALLEE, HUBERT B.—J, Seattle, Wash.
 SASS, HARVEY M.—J, Grand Rapids, Mich.
 SAUZEDDE, CLAUDE M., Mount Clemens, Mich.
 SAUER, HERBERT O.—AM, Baltimore, Md.
 SAVAGE, HARLOW D.—M, New York, N. Y.
 SAWYER, CLARENCE B.—M, Boston, Mass.
 SAAON, RUBEN B.—J, Lincoln, Neb.
 SBURLINO, PASCAL.—AM, Bridgeport, Conn.
 SCHAFFNIT, WILLIAM E.—J, Philadelphia, Pa.
 SCHANCK, HARRY S.—J, New York, N. Y.
 SCHANK, HARRY E.—J, New York, N. Y.
 SCHARNBERG, HERMAN J. B.—M, Long Island, N. Y.
 SCHEDE, JULIUS W.—J, New Brunswick, N. J.
 SCHILLING, PETER G.—M, New York, N. Y.
 SCHIRMER, GUSTAR.—AM, Detroit, Mich.
 SCHOENWALD, OTTO H.—AM, Ponca City, Okla.
 SCHOONMAKER, HERBERT S.—J, New York, N. Y.
 SCHORLING, HENRY F.—J, Elizabeth, N. J.
 SCHWARTZ, WALTER M.—M, Philadelphia, Pa.
 SCOTT, ABRAHAM L.—J, Yonkers, N. Y.
 SCOTT, HERBERT VAN W.—J, Paterson, N. J.
 SCOTT, WALTER C., JR.—J, Washington, D. C.
 SCOTT, WALTER CLEM.—J, Washington, D. C.
 SEAMANS, E. J.—AM, Watervliet, N. Y.
 SEE, JAMES S.—AM, Bay City, Mich.
 SEELIGSBURG, LEONARD W.—AM, New York, N. Y.
 SEILER, GEORGE W.—AM, Lockport, N. Y.
 SHACKLETON, ROY.—M, Chicago, Ill.
 SHERMAN, ERIC W.—J, Oklahoma City, Okla.
 SHERWOOD, EDWARD L.—AM, New York, N. Y.
 SHERWOOD, LYMAN W.—J, Coraopolis, Pa.
 SHMIED, ERNEST A.—J, Sioux City, Iowa.
 SHORKEY, FRED A.—AM, Essington, Pa.
 SHUTE, FREDERICK W.—AM, Boston, Mass.
 SIMCOCK, JOHN H.—AM, Boston, Mass.
 SIMONDS, FRANK A.—AM, Grand Rapids, Mich.
 SIMPSON, FREDERICK.—AM, Washington, D. C.
 SINGLETON, PALMER C.—J, Bethlehem, Pa.
 SINSHEIMER, WARREN A.—AM, New York, N. Y.
 SITTINGER, CARL J.—AM, Fall River, Mass.
 SKELDON, DAVID F.—AM, Toledo, Ohio.
 SMEAD, H. A.—AM, Los Angeles, Cal.
 SMITH, A. T.—AM, Newport News, Va.
 SMITH, CHARLES R.—J, New York, N. Y.
 SMITH, FRANK W.—J, Brooklyn, N. Y.
 SMITH, GEORGE P., JR.—AM, Philadelphia, Pa.
 SMITH, HOXSIE Y.—AM, Pasadena, Cal.
 SMITH, MARSHALL C.—J, Philadelphia, Pa.
 SMITH, RALPH R.—J, Syracuse, N. Y.
 SMITH, SAMUEL A.—J, Buffalo, N. Y.
 SMITH, WARREN P.—J, New Haven, Conn.
 SMITH, WELLS B.—M, Bridgeport, Conn.
 SMYTH, HARRY K.—AM, New York, N. Y.
 SNYDER, WILLIAM.—M, Tate, Ga.
 SNYDER, HOWARD O.—J, San Francisco, Cal.
 SNYDER, WILLIAM F.—AM, Stevens Point, Wis.
 SODERLUND, CARL.—J, Akron, Ohio.
 SOMERS, BRUCE X.—J, Hartford, Conn.
 SOMERS, RICHARD H.—M, New Britain, Conn.
 SOMMER, WILLIAM B.—AM, St. Paul, Minn.
 SPACKMAN, GEORGE D.—J, Coatesville, Pa.
 SPARLING, ERIC C.—AM, Brooklyn, N. Y.
 SPENCE, PAULSEN.—J, Detroit, Mich.
 SPREEN, CHARLES C.—J, Warren, Ohio.
 SPENCER, GEORGE H.—J, Lyndhurst, N. J.
 SPIEGEL, SAMUEL.—J, Bayonne, N. J.
 SRINIVASA-AIENGAR, K.—M, Bangalore City, S. India.
 STADLER, JOHN.—M, Quebec, Can.
 STALL, EARL R.—J, Greenville, S. C.
 STEARNS, FREDERICK A.—J, Cambridge, Mass.
 STEINDE, EMANUEL.—J, New York, N. Y.
 STETTTLER, RAY M.—J, Elizabeth, N. J.
 STEVENSON, FRANCIS E.—M, Mt. Gilead, Ohio.
 STOVER, CHARLES C.—M, Providence, R. I.
 STOWE, LOYD R.—M, St. Louis, Mo.
 STOWELL, AUSTIN L.—J, Shelton, Conn.
 STRANGMAN, WARREN A.—J, Boston, Mass.
 STROCK, EARL J.—AM, Portland, Colo.
 STRONG, ROBERT G.—J, Oil Hill, Kan.
 STUCKERT, FELIX J.—J, Milwaukee, Wis.
 STUNZI, JEAN JACQUES.—M, Lancaster, Pa.
 SULLIVAN, EDWARD L.—AM, Boston, Mass.
 SULLIVAN, GEORGE L.—M, Santa Clara, Cal.
 SUTTON, SAMUEL P.—AM, Akron, Ohio.
 SVENSON, CARL L.—M, Columbus, Ohio.
 SWANSON, JOSEPH L.—M, New Orleans, La.
 SYLVAIN, CHAS. E. B.—AM, Rio de Janeiro, Brazil.
 SYLVANDER, ROY C.—J, Washington, D. C.
 TANNER, JULIUS R.—M, Pittsburgh, Pa.
 TERRY, SEYMOUR.—M, Honolulu, T. H.
 THAYER, WM. B.—M, Columbus, Ga.
 THOBNE, FRED A.—J, Grassell, N. J.
 THOMAS, FIELDER W.—M, Cleveland, Ohio.
 THOMPSON, GEO. B.—J, Hartford, Conn.
 THOMPSON, LEROY H.—AM, Manila, P. I.
 THOMPSON, STEPHEN G.—M, Cleveland, Ohio.
 THWING, LEROY L.—AM, Boston, 34, Mass.
 TILLMAN, JOHN R.—M, Bridgeport, Conn.
 TIPTON, WARREN A.—J, Dallas, Tex.
 TJENK-WILLEN, ALEX. H. J.—M, Oilfields, Cal.
 TOLLEY, CLINTON G.—AM, Cambridge, Mass.
 TONNE, CARL A.—J, Rochester, N. Y.
 TOTIS, THEODORE J., JR.—J, New York, N. Y.
 TOWERS, DONIGAN D.—M, Baltimore, Md.
 TOWSON, JOSEPH P.—J, Baltimore, Md.
 TREWIN, FRANK H.—J, Boston, Mass.
 TRIPP, BURTON H.—M, San Francisco, Cal.
 TRIPP, EDWIN P.—M, Springfield, Mass.
 TROOP, EUGENE F.—AM, Joanna, Berks Co., Pa.
 TRUHAN, LEWIS J.—J, Philadelphia, Pa.
 TRULL, FREDERICK G.—AM, Toronto, Ontario, Can.
 TSUJII, MAKATO.—AM, New York, N. Y.
 TULL, M. GRAHAM.—J, Davids, Pa.
 TYLER, JOSEPH B.—AM, Carney's Point, N. J.
 VAIL, DAVID P.—AM, San Francisco, Cal.
 VAN DUSEN, C. THERON.—J, Detroit, Mich.
 VAN HAMERSVELD, JOHN J. N.—AM, Cleveland, Ohio.
 VASSELLI, ANTHONY J.—AM, Newark, N. J.
 VIAL, WENDELL P.—J, Waterbury, Conn.
 VIGELIUS, F. W.—J, Easton, Pa.
 VOLTSMANN, HENRY J. N.—AM, New York, N. Y.
 VON ROTZ, ROBERT.—J, Cincinnati, Ohio.
 WAGNER, GEO. E., JR.—J, Tulsa, Okla.
 WALKER, GEORGE E.—J, New York, N. Y.
 WALLS, ALFRED J., JR.—J, New York, N. Y.
 WALTON-CRANFORD, WILBERT.—J, New Haven, Conn.
 WALTON, DRUID A.—M, Louisville, Ky.
 WANS, OSWALD.—M, Lincoln, Eng.

WARD, WM. D.—M, New York, N. Y.
 WARE, ARTHUR L.—AM, Hazard, Ky.
 WARE, CHARLES L.—M, Lawrence, Mass.
 WARMINGTON, THOMAS J.—J, Saginaw, Mich.
 WARNOCK, HARRY R.—M, Chicago, Ill.
 WARREN, FRANCIS W.—M, Paris, France.
 WARTHEIN, HARRY J.—M, Richmond, Va.
 WATERMAN, DONALD F.—J, New York, N. Y.
 WATERMAN, JOHN H.—M, Boston, Mass.
 WATSON, HAROLD F.—AM, Narberth, Pa.
 WATSON, M. B.—AM, Toronto, Ontario, Can.
 WATTS, KENNETH—AM, Tulsa, Okla.
 WEAVER, CHAS. W.—AM, Charleston, S. C.
 WEAVER, ERNEST E.—J, Bronx, N. Y.
 WEBER, RUDOLF L.—M, Kansas City, Mo.
 WEBSTER, HAROLD S.—J, Langley Field, Va.
 WEDDELL, RALPH R.—J, Chicago, Ill.
 WEEKS, W. C.—M, Fort Sam Houston, Texas.
 WEINE, CLYDE R.—AM, Star Junction, Pa.
 WEILAND, WALTER F.—J, Pittsburgh, Pa.
 WEINER, CHARLES M., JR.—J, Easton, Pa.
 WEISSBACH, EDWARD A.—J, St. Louis, Mo.
 WELDON, P. LAWRENCE—J, Grandmere, Quebec, Can.

WELCH, ROBERT J. M.—AM, Elizabeth, N. J.
 WELSER, G. BRINTON, JR.—AM, Milwaukee, Wis.
 WERNER, ELMER L.—J, Kansas City, Mo.
 WERSANT, PETER D.—J, Minneapolis, Minn.
 WHEELER, DUDLEY I.—A, Lakewood, Ohio.
 WHEELER, JAY C.—AM, Wellsville, N. Y.
 WHEATON, EGBERT A.—AM, Allston, Mass.
 WHELAN, RODERICK J.—AM, Elyria, Ohio.
 WHITELEY, STOCKETT M.—AM, Baltimore, Md.
 WICKERS, ARTHUR T.—J, Garfield, N. J.
 WILLIAMS, ALBERT H.—AM, Orange, N. J.
 WILLIAMS, CHARLES H.—M, Litchfield, Ill.
 WILLIAMS, DAVID C.—AM, Allentown, Pa.
 WILLIAMS, EDGAR H.—M, Portsmouth, N. H.
 WILLIS, CHARLES C.—M, Framingham, Mass.
 WILLIS, RICHARD M.—J, Mobile, Ala.
 WILLOUGHBY, GEO. A.—J, Saginaw, Mich.
 WILLSON, GEO. T.—M, Poughkeepsie, N. Y.
 WILSON, CHARLES H.—AM, Dallas, Texas.
 WOHRLE, ERNEST A.—J, New York, N. Y.
 WOLF, W. DALE—AM, Columbus, Ohio.
 WOLF, JULIUS—J, Lexington, Ky.
 WOLFE, JAY AUSTIN—AM, Columbus, Ohio.

WOLFERG, EDWIN C.—J, Seattle, Wash.
 WOODWARD, EDGAR L.—A, New York, N. Y.
 WOODWARD, FRANCIS A.—J, Washington, D. C.
 WOSTREL, JOHN F.—J, Boston, Mass.
 WRIGHT, DANIEL K.—M, Paterson, N. J.
 WRIGHT, JAMES A.—AM, Detroit, Mich.
 WRIGHT, JAMES C.—AM, Olathe, Kan.
 WRIGHT, THOMAS C.—J, Philadelphia, Pa.
 WUNDERLICH, MILTON S.—J, St. Paul, Minn.
 WURGEL, RENA A.—J, Dallas, Texas.
 WYNKOOP, ALBERT H.—A, Philadelphia, Pa.
 WYSE, FRANCIS O.—J, Cambridge, Mass.
 YAO, KWANG Y.—J, Philadelphia, Pa.
 YATES, EDWIN T.—AM, Newark, N. J.
 YODER, HOWARD D.—M, Detroit, Mich.
 YOPP, PAUL R.—J, Atlanta, Ga.
 YOUNG, WILLIAM R.—J, Bridgeport, Conn.
 ZACHOW, CLARENCE W.—M, Fond du Lac, Wis.
 ZEPFLER, LOUIS H.—J, Elizabeth, N. J.
 ZERBEY, ARTHUR L.—J, Kingston, Pa.
 ZIMMERMAN, WILLIAM F.—J, Philadelphia, Pa.
 ZWINGLI, CARL T.—J, Paterson, N. J.

CANDIDATES FOR MEMBERSHIP

TO BE VOTED ON AFTER OCT. 18, 1920

BELOW is a list of candidates who have filed applications since the date of the last issue of MECHANICAL ENGINEERING. These are arranged geographically. Applications for change of grading are also posted. The total number of applications received and listed below is 182.

The Membership Committee, and in turn the Council, urge the

members to scrutinize this list with care and advise the Secretary promptly of any objections to the candidates posted. All correspondence in this regard is strictly confidential. Unless objection is made to any of the candidates by Oct. 18, 1920, and provided satisfactory replies have been received from the required number of references, they will be balloted upon by the Council.

NEW APPLICATIONS

Alabama

GAINES, WALTER S., Chief Engineer, Mobile Tractor Co., Mobile

California

SCOTT, JOHN, Oakland
 SKAIFE, ARTHUR F., Sales Engineer, Spencer Elevator Co., San Francisco
 TOWNE, RALPH E., Senior Electrical Engineer, Interstate Commerce Commission, San Francisco

Colorado

KROUSE, ROBERT L., Colorado Springs
 RHOADS, BURT L., Chief Engineer, Gates Rubber Co., Denver

Connecticut

CLARKSON, WILLIAM F., Gauge Checker, Columbia Graphophone Co., Bridgeport
 FAX, SAMUEL W., Mechanical Engineer, Columbia Graphophone Mfg. Co., Bridgeport
 FOSTER, CHARLES B., Designer & Assistant to Mechanical Engineer, Bridgeport Brass Co., Bridgeport
 GEARING, CHARLES M., Division Manager, New Departure Mfg. Co., Meriden
 HOMAN, WILLIAM C., Master Mechanic, Edw. Miller & Co., Meriden
 JARVIS, MARSHALL N., President & Treasurer, The Chas. L. Jarvis Co., Gildersleeve
 STEVENSON, GEORGE K., Superintendent, Henry G. Thompson & Son Co., New Haven
 TELLER, S. JAY, Head of Patent Department, Niles-Bement-Pond Co., Hartford
 THOMPSON, F. ARCHER, Chief of Equipment Dept., Bullard Machine Tool Co., Bridgeport
 WOOD, GEORGE E., Supervisor of Power Plants, The Connecticut Co., New Haven

Delaware

SCHOCH, NORMAN H., Research Engineer, Hercules Power Co., Wilmington

Georgia

BURFORD, ROBERT A., JR., Treasurer, Burford Hall & Smith, Atlanta
 DUPEE, CHARLES F., Chief of Mechanical Dept., Robert & Co., Atlanta
 HURTT, WILLIAM T., Special Sales Engineer, District Office, Westinghouse Electric & Mfg. Co., Atlanta
 JONES, DAVID C., JR., Design and Fire Prevention Engineer, Georgia Railway & Power Co., Atlanta
 MEADE, NORMAN G., Editor, Southern Engineer, Atlanta
 NUNAN, THOMAS R., Sales Engineer, Armstrong Cork & Insulation Co., Atlanta

Illinois

ARTHUR, PAUL, Supervisor Industrial Engineering, L. V. Estes, Inc., Chicago

BECK, MILTON, Vice-President, The Page Co., Chicago

COLBECK, FRED W., Manufacturing Engineer, Western Electric Co., Inc., Chicago
 HOGE, FREDERICK H., Manager Speed Reducer Dept., W. A. Jones Foundry & Machine Co., Chicago

TILBURY, S. RAY, Mechanical Engineer, The Lewis Draft Appliance Co., Chicago

Indiana

ERNST, HENRY S., Chief Gauge Designer, Nordyke & Marmon Co., Indianapolis
 KOCH, CHARLES E., 2nd Assistant to Master Mechanic, Standard Oil Co., Whiting
 NEEDHAM, HOWARD H., Assistant Master Mechanic, American Bridge Co., Gary
 WARRICK, WOODWARD A., Experimental Engineer, Diamond Chain & Mfg. Co., Indianapolis

Louisiana

DAY, DONALD M., Plant Engineer, New Orleans Refining Co., Sellers
 DELEIG, EUGENE F., Assistant Engineer, Sewerage & Water Board, New Orleans
 JONES, JOHN T., Assistant Manager, Godchaux Sugars, Inc., New Orleans
 KLIPPEL, GEORGE H., Engineer, The Foundation Co., New Orleans

Maryland

BIRD, CHARLES T., District Sales Engineer, Pangborn Corp., Hagerstown

Massachusetts

ALLEN, LAWRENCE J., Superintendent, Miller Candy Co., Roxbury
 BOLLES, FREDERICK N., Senior Member, Bolles & Dwyer, Boston
 COVE, CHARLES H., Master Mechanic & Engineer, Warren Cotton Mills, West Warren
 DWYER, JAMES P., JR., Consulting Engineer, Bolles & Dwyer, Boston
 EDDY, LLOYD C., Instructor, Franklin Union, Boston
 ELLIOTT, EDWARD, Assistant Chief Engineer, Osgood Bradley Car Co., Worcester
 GREENE, RALPH S., Production Manager, Frank Mossberg Co., Attleboro
 HORGAN, PATRICK J., Foreman Exp. Draftsman, United Shoe Machinery Corp., Beverly

LITTLE, WILLIAM R., Manager Boston Office, Bailey Meter Co., Boston
 LUTHER, BENJAMIN S., Engineer, Stone & Webster, Boston
 McLAUGHLIN, GEORGE E., Mechanical Engineer, The Turner Tanning Machinery Co., Peabody
 REED, ALONZO B., Member & Engineer, Deeben Engineering Associates, Boston
 SCHEM, AUGUSTUS R., Assistant District Manager, John A. Stevens, Fall River

WALDRON, EVERETT H., Mechanical Superintendent, Mount Hope Finishing Co., North Dighton
 YEATON, PHILIP O., Instructor in Mechanical Engineering, Lowell Textile School, Lowell

Michigan

FORBATH, ELMER F., Squad Leader, Lockwood, Greene & Co., Detroit
 FURLONG, HAROLD P., Detroit
 GRAY, WILLIAM E., Master Plumber & Steam Fitter, Gray & Moss, Saginaw
 GUMPPER, HAROLD D., Sales Engineer, The Lakewood Engineering Co., Detroit
 HAMILTON, CHARLES A., Fargo Engineering Co., Jackson
 HOLLIS, OLIVER N., Engineer, Detroit Edison Co., Detroit
 HOPKINS, RALPH Z., Assistant Plant Superintendent, Hudson Motor Car Co., Detroit
 KENDRICK, WARREN F., Designing Engineer, Ford Motor Co., Detroit
 PAULINS, FRANK U., Tool Engineer & Manufacturing Engineer, Oakland Motor Car Co., Pontiac
 PEARS, RICHARD W., Draftsman, Clark Equipment Co., Buchanan
 PRESCOTT, CURRY S., Vice-President and Manager, Pumping Engine Department, The Prescott Co., Menominee

Minnesota

CROSBY, CHARLES W., Mechanical Engineer, Mutual Automobile Association, Inc., St. Paul
 IRWIN, VINCENT H., Boiler Room Engineer, Twin City Rapid Transit Co., Minneapolis
 JONES, EDWIN F., Mechanical Engineer, Charles L. Pillsbury Co., St. Paul
 LEWIS, ROBERT D., Vice-President, The George M. Kenyon Co., St. Paul

Missouri

CARPENTER, SAMUEL D., Employment Manager & Assistant to Superintendent, Busch Sulzer Bros. Diesel Engineering Co., St. Louis

New Hampshire

WELLS, HARRY A., Partner, Larson & Wells, Hanover

New Jersey

ARES, ROBERT R., Maintenance Machinist, E. I. Dupont de Nemours, Arlington
 BRIETENFELD, FREDERICK, Instructor, Dept. of Mechanical Engineering, Stevens Institute of Technology, Hoboken
 GREENE, LAURENCE H., Production Manager, Oxweld Acetylene Co., Newark
 PFEL, WALTER G., Superintending Engineer, Botany Worsted Mills, Passaic
 TAYLOR, PHILIP B., Montclair

VANDER KLOSTER, CORNELIUS, Designer,
Edison Storage Battery Co., Orange
WORDEN, BEVERLEY LYON, West Orange

New York

ACKERMAN, FRANK J., Senior Draftsman,
Dunlop Tire & Rubber Corp. of America, Buffalo
APPLEBAUM, SAMUEL B., Assistant Techni-
cal Manager, The Permutit Co., New York
BARTON, WARREN H., Designer, American
Car & Foundry Co., New York
BECKHORN, WALTER R., Assistant Production
Manager, Lidgerwood Mfg. Co., Brooklyn
BELL, HAROLD S., Engineer, Sinclair Consoli-
dated Oil Corp., New York
BOLTON, WILLIAM R., Assistant Mechanical
Engineer, Dwight P. Robinson & Co., New York
BUXBAUM, SAUL L., Marine Designer, Brook-
lyn Navy Yard, Brooklyn
CARTER, DONALD P., Heating & Ventilating
Engineer, Foundation Co., New York
COE, ELBERT H., Chief Draftsman, Willys
Corp., New Process Gear Division, Syracuse
DART, EDWARD W., Manager, Engineering
Dept., Johnson & Higgins, New York
EVERITT, GEORGE G., Salesman, Mechanical
Dept., Whitman & Barnes Mfg. Co., New York
GARDNER, MARVIN B., Engineering Drafts-
man, American Locomotive Co., Schenectady
GREENWOOD, RICHARD F., Chief Draftsman,
Powers Accounting Co., Brooklyn
HOOK, WARREN H., Assistant Professor, Corn-
nell University, Ithaca
JENKINS, THOMAS A., Mechanical Designer,
Combustion Engineering Corp., New York
KLEIN, GEORGE H., Draftsman, Locomotive
Feed Water Heater Co., New York
LARGE, FRANK E., Vice-President and Re-
search Engineer, Johnson Rim & Parts Co.,
Inc., Buffalo
MANGER, PAUL A., Chief Draftsman, Farrel
Foundry & Machine Co., Buffalo
MEYER, HERMAN F., Tool Designer & Check-
er, Sperry Gyroscope Co., Brooklyn
NEXSEN, RANDOLPH H., Electrical Engineer,
Public Service Commission, New York
OSOWIECKI, LEE C., Draftsman, The Beaver
Board Companies, Buffalo
PRENDERGAST, RICHARD F., Operating En-
gineer, New York Edison Co., New York
PROBST, GEORGE R., Testing Engineer, Moore
Steam Turbine Corp., Wellsville
RIBLET, WILLIAM H., Eastern Div. Manager,
C. A. Dunham Co., New York
RIDLON, JOHN R., Superintendent, Terminal
Engineering Co., New York
SCHULTZ, RUDOLPH H., Designer, Potdevin
Machine Co., Brooklyn
STAUFFER, FRED, Toolmaker, Doehler Die
Casting Co., Brooklyn
STOKES, SAMUEL O., Assistant Engineer,
American Telephone & Telegraph Co., New York
VER PLANCK, WILLIAM E., Head of Marine
Section, Turbine Engineering Dept., General
Electric Co., Schenectady
WARNER, RALPH M., Gaston, Williams & Wig-
more, Inc., New York
WILLIAMS, ERNEST, Mechanical Engineer,
Clyde K. Place, New York
WITTAL, JULIAN J., Consulting Engineer and
Patent Attorney, New York
WOLFF, RICHARD A., President, Wolff & Mu-
nier, Inc., New York

Ohio

ALLEN, WILLIAM R., Chief Engineer, The
American Multigraph Co., Cleveland
BLAINE, WALTER E., Industrial Engineer,
The Cleveland Tractor Co., Cleveland
DEVOE, BENJAMIN H., Production Engineer,
National Carbon Co., Inc., Fremont
FISHER, JOHN A., Professor of Industrial
Management, Ohio State University, Columbus
HAWKE, MELVILLE R., Power Engineer, Fire-
stone Tire & Rubber Co., Akron
HOLLIDAY, FLETCHER L., Salesman, Wor-
thington Pump & Machinery Corp., Cincinnati
JOSEPH, HARVEY W., Assistant Engineer,
The G. A. Gray Co., Cincinnati
JUSTICE, ITHAMAR M., Vice-President, The
Manufacturers Equipment Co., Dayton
KIHN, WILLIAM J., Assistant Superintendent,
Modern Foundry Co., Cincinnati
MOOHL, JOHN G. J., Chief Engineer, The
Cleveland Machine Tool Co., Cleveland
SOUDER, CLEMENT F., Jr., Production and

Efficiency Engineer, Franklyn Engineering
Service Corp., Toledo
VICKERY, ZELDON B., Chief Draftsman & De-
signer, National Carbon Co., Inc., Fremont
WHITMORE, JAMES D., Mechanical Engineer,
Sun Co., Toledo

Oklahoma

ROCKMAN, WILLIAM H., JR., Mechanical En-
gineer, Empire Refineries, Inc., Tulsa

Pennsylvania

ARMSTRONG, EDWIN J., Assistant Engineer
of Plant, Wm. Cramp & Sons S. & B. Co., Philadelphia
BEALE, LEONARD T., Secretary, John T. Lewis
& Bros. Co., Philadelphia
BJORNSON, EDWIN, Draftsman, Heyl & Pat-
terson, Pittsburgh
BORTON, GEORGE W., President & General
Manager, Pennsylvania Crusher Co., Philadelphia
BOWMAN, JOHN B., Mechanicsburg
CAPPOCK, WALTER J., Draftsman, Baldwin
Locomotive Works, Philadelphia
CROSBY, EDWARD L., Special Assistant to
General Manager, Edgewater-Steel Co., Oakmont
DICKSON, GEORGE L., Lieut. Comdr., U. S. N.,
Assistant Insp. Eng. Material, Philadelphia
HERRESHOFF, A. GRISWOLD, Chief Engineer,
Bethlehem Motors Corp., Allentown
KIRKPATRICK, CRAWFORD N., Sales Manager,
Landis Machine Co., Waynesboro
LACHMAN, IAN W., Sales Engineer, Baden-
hausen Co., Philadelphia
LANDIS, LAWRENCE H., Master Mechanic,
Central Iron & Steel Co., Harrisburg
LEE, YUAN, American Engineering Co., Philadelphia
LONERGAN, JOHN E., Pres., J. E. Lonergan
Co., Philadelphia
LONG, JOSEPH K., Chief Draftsman, Pennsylv-
ania Railroad Co., Sunbury
MCDOWELL, DAVID W., Chief Draftsman,
Quaker City Rubber Co., Wissinoming
MARSHALL, DAVID L., Factory Manager,
Haverford Cycle Co., Philadelphia
MATCHETT, WILLIAM LLEWELLYN, Lehigh
Portland Cement Co., Allentown
MERRIFIELD, J. D., Mechanical Engineer,
Reed Mfg. Co., Erie
PORTER, W. B., Assistant Engineer, Pennsylv-
ania System, Eastern Region, Central Divi-
sion, Williamsport
RYMAN, CHARLES F., Pittsburgh
STEVENS, WILLIAM H., District Sales Man-
ager, The Aldrich Pump Co., Allentown
WORLEY, FLOYD E., Technical Superintend-
ent, Lycoming Rubber Co., Williamsport
YOUNG, CHARLES H., Assistant to Chief Ord-
nance Inspector, Bethlehem Steel Co., Bethlehem

Tennessee

BUSH, GEORGE C., Mechanical Superintendent,
Aluminum Co. of America, Alcoa

Texas

BEAMAN, DANIEL F., Supervising Engineer
Sales Dept., The Texas Co., Houston
HOLSWORTH, ROBERT C., Engineer, Conti-
nental Supply Co., Wichita Falls
LISTER, FRANCIS G., Mechanical Engineer, El
Paso & Southwestern R. R., El Paso

Utah

MOSSMAN, JOSEPH B., Branch Manager, In-
gersoll-Rand Co., Salt Lake City

Virginia

NIEDERHAUSER, FREDERICK C., Assistant
Superintendent, Viscose Co., Roanoke

Washington

WALSTAD, ADOLPH N., Proprietor, Walstad
Machine Co., Tacoma

West Virginia

MCGOUGH, FRANK, Steam Engineer, Weirton
Steel Co., Weirton

Wisconsin

LINCOLN, CHARLES S., Chief Draftsman,
Allis-Chalmers Mfg. Co., Milwaukee

Canada

DIXON, LEON S., Principal Assistant Engi-
neer, Riordon Co., Ltd., Mattawa, Ontario
THOMPSON, GEORGE N. V., Engineer, Cana-
dian National Railways, Winnipeg, Manitoba

Cuba

LESLIE, W. T., General Electrical Inspector,
Havana Central Railroad Co., Havana

England

BONSTOW, THOMAS L., Chief Engineer,
Whitehall Petroleum Corp., Ltd., London

Italy

CULLETON, LEO G., Assistant Managing Di-
rector, Mario Tansini, Milan

South America

HARDING, PHILIP O., Chief Draftsman, Brad-
den Copper Co., Rancagua, Chile
HOFFMAN, RALPH N., Master Mechanic,
Andes Copper Mining Co., Antofagasta, Chile
ROBERTS, CLAY, Construction Engineer,
Andes Copper Mining Co., Antofagasta, Chile

CHANGE OF GRADING

PROMOTION FROM ASSOCIATE-MEMBER

Michigan

DOEN, LORAN F., Chief Draftsman, Champion
Ignition Co., Flint

Nebraska

YINGLING, JOHN C., Assistant Chief Engi-
neer, Fort Omaha Balloon School, Fort Omaha

New York

BANGS, GEORGE H., Production Manager,
Lidgerwood Mfg. Co., Brooklyn
PAVITT, WILLIAM H., Chief Engineer, Wil-
putte Coke Oven Corp., New York
SINGER, SIDNEY C., Superintendent of Dis-
tribution, Syracuse Lighting Co., Syracuse

Pennsylvania

LUETSCHER, OLIVER P., General Manager,
Geo. J. Hagan Co., Pittsburgh

PROMOTION FROM JUNIOR

Connecticut

FURBUSH, GRANT E., Chief Draftsman, Faf-
nir Bearing Co., New Britain
HARRIS, MURRAY W., Industrial Engineer,
H. G. Thompson & Son Co., New Haven
JOY, JOSEPH, Mechanical Engineer, Frasse
Steel Works, Inc., Hartford

Georgia

MURRAY, ETHAN FRANK, Mechanical Engi-
neer, Lumis Cotton Gin Co., Columbus

Illinois

PAINTER, WALTER, Technical Advertising,
Erwin, Wasey & Co., Chicago

Maryland

MILLER, HARRY W., General Engineer, Balto.
Copper Smelting & Rolling Co., Baltimore

Michigan

VINE, HOWARD L., Tool Design Checker, Pack-
ard Motor Car Co., Detroit

New York

CROCKETT, CHARLES H., Research Engineer
Troy
NORRIS, JAMES U., Superintendent, Woman's
Hospital in the State of New York, New York
SIMPSON, COLIN C., Jr., General Supt. of
Mains & Services, Consolidated Gas Co. of
New York, New York

Pennsylvania

GOLDSMITH, LESTER M., Engineer of Tests,
Atlantic Refining Co., Philadelphia

Canada

LEONARD, IRBETSON, Vice-President and Gen-
eral Manager, E. Leonard & Sons, Ltd.,
London, Ontario

SUMMARY

New Applications.....	164
Applications for Change of Grading.....	
Promotion from Associate-Member....	6
Promotion from Junior.....	12
Total.....	182